SALES, COST OF SALES AND PROFIT
CONTRACT AF33(600)-29264
FOR DECEMBER 1959 CALCULATIONS

	Sales	C/S	Profit
Airplanes	$110,614,705.64	$ 97,993,567.73	$12,621,137.91
Miscellaneous	1,924,166.60	1,704,619.19	219,547.41
Spares	18,692,302.69	16,642,000.79	2,050,301.90
Sub-Total	131,231,174.93	116,340,187.71	14,890,987.22
Adjustment in Total	(62,859.93)	(1,178,552.95)*	1,115,693.02*
Total	$131,168,315.00	$115,161,634.76	$16,006,680.24
Mandatory Adjustment	$(62,859.93)	$(55,687.61)	$(7,172.32) 11.40%

*Cost may be increased and profit decreased by approx. $87,000 for 3 Q.E.C. Kits not delivered to date.

Cost Accounting Department
Cost Analysis Section
25 January 1960

CONVAIR SD

SUMMARY OF CONTRACT ESSENTIALS
FIXED PRICE INCENTIVE
Contract AF 33(600)-29264

General: Outlined herein are the essentials of Contract AF 33(600)-29264

Item I: One hundred eight (108) F-102A airplanes at a unit price of $716,782.75. Total cost for 108 F-102A airplanes $77,412,537.00. Delivery dates are as follows:

1956				
Aug	Sept	Oct	Nov	Dec
4	17	28	30	29

Item II: Spare parts for the 108 F-102A airplanes. Estimated total price is $9,048,391.02.

Item III: Special tools and ground handling equipment for the 108 F-102 airplanes. Estimated total price $4,704,000.00.

Item IV: Technical data and revisions thereto for the 108 F-102A airplanes in accordance with Tables 200, 207, 209, 210, 250, 219 and Exhibit No. 1-1. Total price for Technical Data is $67,138.00 and is included in Item I above.

Table 200: Contractor shall furnish: Detail lubrication list.

Table 207: Contractor shall furnish: Standard aircraft characteristics charts.

Table 209: Contractor shall furnish: Piloted aircraft data, stress analysis, weight and balance data, aircraft checkers report, and air crew operation check list.

Table 210: Contractor shall furnish: 16 m.m. Films (in color and with sound), an annual review 20 to 30 minutes duration, expedited short films depicting events of progress.

Table 250: Contractor shall furnish: Complete sets of reproductions of all drawings and data lists.

Table 251: Contractor shall furnish: One complete set of microfilm of all drawings of production articles, special tools, standards, specifications, and revisions thereto.

MCETT Exhibit No. 1-1: Contractor shall furnish: Technical publications as listed in this Exhibit.

Item V: Bill of materials with revisions to summary bill of materials for F-102A and for TF-102A.

Item VI: Engineering changes in the total estimated amount may be authorized from time to time under the provisions of this contract or ammendments hereto when they specifically reference this Item. The amount committed for this Item is $1,994,003.88.

Item VII: Twenty-eight (28) TF-102A airplanes at a unit price of $899,552.25 and a total price of $25,187,463.00. Delivery dates are as follows:

1956		1957	
Nov	Dec	Jan	Feb
3	5	8	12

Item VIII: Spare parts for the 28 TF-102A airplanes. Estimated total price is $3,235,268.40.

Item IX: Special tools and ground handling equipment for the 28 TF-102A airplanes. Estimated total price is $377,812.00.

Item X: Technical data and revisions thereto for the 28 TF-102A airplanes in accordance with the provisions contained in Item 4 above. Estimated total price is $67,597.00 is included in the price of Item 7.

Item XI: Five (5) Mobile training units in accordance with Contractor's specification 8-00302 at a unit price of $250,776.00 and a total price of $1,253,880.00. Fifteen (15) copies of F-102A Flight handbook, maintenance handbook, structural repair handbook and inspection requirements handbook and two (2) copies of Illustrated parts breakdown, to be furnished to the Contractor by the Air Force Plant Representative, will be shipped with each Mobile Training Unit.

Item XII: Such engineer and/or specification changes for the Mobile Training Units as may be accomplished by the Contractor pursuant to the provisions of paragraph (Q) of this contract.

Notes:

1. F-102A airplanes shall be serially numbered AF 55-3357 through 55-3464. TF-102A airplanes shall be serially numbered AF 55-4032-55-4059.
2. Except as otherwise provided in this contract, Contractor's system of quality control shall be in accordance with the provisions of Military Specification MIL-Q-5923.
3. Contractor shall expand Production Tooling to be capable of producing TF-102A nose sections at a rate of 15 per month.
4. Contractor shall expand production tooling to be able to produce airplanes at a rate of 62 per month. Contractor is authorized to use on a no-charge-for-use-basis the tooling which the Government acquired under Contract AF 33(600)-5942 and AF 33(600)-23903.
   All tooling in this paragraph will become the property of the Government.
5. Prices set forth in Item I and Item 7 include installation of MG-10 and/or MG-10T electronics equipment including missile auxilaries, data linkage, automatic flight control system, and optical sights furnished to Contractor as GFAE. No amount is included in this contract for check-out, packaging, pre-flight, and flight testing of this equipment, but will be subject to separate negotiations.
6. Contractor is authorized to use on a no-charge-for-use-basis the facilities which are authorized under facilities Contract Nos. AF 33(600)-5792 and AF 33(038)-7330.
7. Prices set forth in Items 1 through 10 do not include the price for revision pages required to keep handbooks and engineering data current as design, production, modification, and technical order changes occur.
8. Areas of common work under this contract and contracts AF 33(600)-5942 and AF 33(600)-23903 including, but not limited to, engineering liaison, tool liaison and maintenance, some areas of factory tooling, direct labor, common materials, and other elements of cost, will be proportionately allocated by the Contractor between Contracts in accordance with generally accepted accounting practices.
9. Fixed Price incentive type contract.
10. Contractor shall provide one (1) Pilot and one (1) Engineer for an Air Force Indoctrination team which will visit F/TF-102A cases in the Zone of Interior or off-shore for such periods as designated by the Contracting Officer.

Profit Limitation 10%

Contract 29264
(-) Possible adjustment
as of July 31, 1959

7207 BUFF
G7207 GREEN TINT

Actual Costs as of 7/31/59	115,158,790 14	
Total Negotiated Costs	115,490,520 91	
Difference	331,730 77	
Plus S & O Reserve	49,823 26	
Plus Termination Reserve	60,248 00	avco [illegible] 1720 00
Costs to Complete or Potential Profit	441,802 03	Tyf [illegible] 52844 89
		Hoover 5683 18
Negotiated Sales	131,168,315 00	
Booked Sales as of 7/31/59	131,231,174 93	
Adjustment to Sales	- 62,859 93	
Negotiated Profit	15,677,794 09	
Booked Profit	14,890,987 22	
Adjustment to Profit	+ 786,806 87	

Adjustment to the Financial Statement
Based on Final Negotiation
of Contract AF 33(600) - 29264

	G.S.E. & Spares 14.4916%	Airplanes M.T.U. & Other 85.5084%	Total
Negotiated Income	19,008,387.54	112,159,927.46	131,168,315.00
Costs	16,736,424.31	98,754,096.60	115,490,520.91
Profit	2,271,963.21	13,405,830.88	15,677,794.09
Rate of Profit to Sales	11.9524	11.9524	11.9524
Booked as of Nov. 30, 1958 Income	18,686,562.00	112,538,872.24	131,225,434.24
Costs	16,637,016.00	99,698,186.92	116,335,202.92
Profit	2,049,546.00	12,840,685.32	14,890,231.32
Rate of Profit to Sales			
Adjustment Income	321,825.54	<378,944.78>	<57,119.24>
Costs	99,408.31	<944,090.32>	<844,682.01>
Profit	222,417.21	565,145.56	787,562.77
	<20,000.00>		
	2,271,963.21 ~~2,071,278.79~~	13,405,830.88 ~~12,447,553.976~~	15,677,794.09
Booked as of Jan. 31, 1959 Sales			131,231,174.93
Costs			116,340,187.71
Profit			14,890,987.22

29264

		Brochure	Less Costs No't to be Incurred	Total Cost at Completion	Less G.O.	S.D. Cost at Comp.
Spares		9,198302.00	<2000.00>	9200302.00	30,598.79	9169703.21
G.S.E.		7,831,518.00	40,961.00	7790557.00	16,503.82	7774053.18
Airplanes		98,980,699.00	141,433.00	98839266.00	1,291,290.00	97047,976.00
M.T.U.		1,504657.00	— 0 —	1504657.00	5868.48	1498788.52
Total		117515176.00	*180,394.00	117334782.00	1844261.09	115490,520.91
						115490,520.91

* Cancellation Costs	$ 39,233.00
1958 Year End Ovhd Adj	2183.00
Property Taxes	1,651.00
Spares	<2000.00>
G.S.E. - duplication in Brochure	40961.00
Mat'l not Allocable to Contract	98366.00
	$ 180394.00

Reconcilliation

CV Costs per Brochure		117,515,176.00
Less Costs not to be Incurred	180,394.00	
Less Costs Disallowances	419,814.00	600,708.00
		116914968.00

COST ACCTG

CONTRACT AF33(600)-29264

YEAR END 1957 ADJUSTMENT - AIRPLANES

Indicated Income per Oct. 1957 Target Status Report			$11[illegible],[illegible]43,703
Less - Estimated Overtime and Overhead Disallowances			[illegible] 3[illegible]9,000
Revised Indicated Income			$110,614,7[illegible]8
Indicated Costs per Oct. 1957 Target Status Report		$99,7[illegible]7,7[illegible]1	
Less-General Office Overhead:			
San Diego	$1,2[illegible],10[illegible]		
Fort Worth	463,571	1,72[illegible],[illegible]7[illegible]	
San Diego Division Indicated Costs			97,9[illegible],0[illegible]2
San Diego Division Indicated Profit			$ 12,630,685
% to Sales			11.41%

Adjustment Required

	Quoted	Adjusted	Adjustment
F-102:			
Sales (1[illegible] @ [illegible] .[illegible] S/P [illegible].775, [illegible])	$ 8[illegible],1[illegible],4[illegible]6.3[illegible]	$83,7[illegible],639.00	$(2,33[illegible],857.3[illegible])
Cost of Sales	7[illegible],[illegible],[illegible].[illegible]	74,[illegible],[illegible].09	([illegible],851,[illegible]7.1[illegible])
Profit	9,[illegible],[illegible].11	9,56[illegible],5[illegible]1.[illegible]	517,4[illegible].80
% to Sales	10.50%	11.41%	
TF-102:			
Sales ([illegible] @ [illegible]4,6[illegible].02 S/P @ [illegible]5[illegible],[illegible]2.[illegible])	$27,57[illegible],[illegible].56	$26,[illegible],[illegible]66.64	$ (7[illegible]7,1[illegible].92)
Cost of Sales	24,676,[illegible]31.66	2[illegible],76[illegible],[illegible]40.64	(91[illegible],[illegible]1.[illegible]2)
Profit	[illegible],[illegible]94,[illegible]76.90	3,[illegible],[illegible]26.00	165,649.10
% to Sales	10.50%	11.41%	
Combined Adjustment:			
		Sales	$(3,0[illegible]0,9[illegible].24)
		Cost of Sales	(3,764,0[illegible].14)
		Profit	683,[illegible].90

Cost Accounting Department
Cost Audit Section
2[illegible] January 195[illegible]

Contract 29264

7207 BUFF
G 7207 GREEN TINT

Booked Sales, Cost of Sales + Profit.

1	2	3	4	5	6	7
Date		Airplane F.	 T.F.	Spares	Other M.T.V. Comp. Prog.	
July 1959 Sales		83 790 639 00	26 824 066 64	18 692 302 69	1 924 166 60	
Cost of Sales		74 230 127 09	23 763 440 64	16 642 000 79	1 704 619 19	
Profit		9 560 511 91	3 060 626 00	2 050 301 90	219 547 41	

[redacted]

Contract AF 33(600)-29264
Analysis of Costs to Complete
As of August 31, 1959

Total Negotiated Costs			$115,490,520.91
Actual Costs as of 8/31/59			115,167,951.22
Difference			$ 322,569.69
Costs Remaining			
1. Spares Exhibit "C"			$ 2,304.90
2. 3 Q.E.C. Kits @ $29,000.00			87,000.00
3. Open Commitments			
Stinson A/C	P.O. 326430	$ 228.00	
Cromer	451522	543.79	
Air Ind. of Calif	476741	237.80	
Eastern A/C	477988	150.00	
Cromer	451520	586.56	
Guardian Electric	452471	186.20	
Kollsman	349389	395.00	
Houdaille	444247	4,807.97	
Lear	475620	103.51	7,238.83
4. Fort Worth's Costs Remaining to be I.D.I.			11,370.97
			$ 107,914.70
Potential Profit Pickup			$ 214,654.99

Notes:

1. Source-Memo from F.J. Kennie to G. R. Sibley dated 8/25/59
2. Source-Memo from Spares Estimating dated 5/8/59
3. Open Commitment Tab run of 7/31/59 corrected to 8/26/59
4.

F.W. Cost Ledger 8/31/59	$19,400,137.71
F.W. Cost Excluded in FW-WIP	150,322.74
Corrected F.W.	19,550,460.45
S.D. Cost Ledger 8/31/59	19,539,089.48
	$ 11,370.97

Cost Accounting Department
Works Accounting Section RV
15 September 1959

C-V
CONVAIR

Contract AF 33(600)-29264
Analysis of Costs to Complete
As of August 31, 1959

Total Negotiated Costs			$115,490,520.91
Actual Costs as of 8/31/59			115,167,951.22
Difference			$ 322,569.69
Costs Remaining			
1. Spares Exhibit "C"			$ 2,304.90
2. 3 Q.E.C. Kits @ $29,000.00			Ⓐ 87,000.00
3. Open Commitments			
Stinson A/C	P.O. 326430	$ 228.00	
Cromer	451522	543.79	
Air Ind. of Calif	476741	237.80	
Eastern A/C	477988	150.00	
Cromer	451520	586.56	
Guardian Electric	452471	186.20	
Kollsman	349389	395.00	
Houdaille	444247	4,807.97	
Lear	475620	103.51	7,238.83
4. Fort Worth's Costs Remaining to be I.D.I.			11,370.97
			$ 107,914.70
Potential Profit Pickup			$ 214,654.99

Notes:

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F.W. Cost Excluded in FW-WIP	150,322.74
Corrected F.W.	19,550,460.45
S.D. Cost Ledger 8/31/59	19,539,089.48
	$ 11,370.97

Cost Accounting Department
Works Accounting Section
15 September 1959

Ⓐ Outstanding at 1-22-60 per Dick Knapp - (Serv Parts indicates we are attempting to cancel these from the contract - if we succeed in cancellation this would undoubtedly reduce the redetermined sales value).

Contract 29264

Property Tax Refund

<$ 196,159.68>

Offsets. 34,000.00

<$ 162,159.68>

We will receive amount from the county and refund to Air Force (We negotiated these taxes)

Sales Taxes Period July 1, 1954 – June 30, 1957 we are refuting by our own audit which should reduce the amounts.

Contract AF 33(600)-29264
Analysis of Costs to Complete
as of August 31, 1959

25
29
41

7207 BUFF
G 7207 GREEN TINT

Total Negotiated Costs				$ 15,490,520.91
Actual Costs as of 8/31/59				15,167,951.22
Difference				$ 322,569.69
Costs Remaining				
1. Spares Exhibit "C"				$ 2,304.90
2. 3 Q.E.C. Kits @	29,000.00			87,000.00
3. Open Commitments				
Stinson A/C	P.O. 326420	$ 228.00		
Cromer	451522	543.79		
Air Ind. of Calif.	476741	237.80		
Eastern A/C	477988	150.00		
Cromer	451520	586.56		
Guardian Electric	452471	186.20		
Kollsman	349389	395.00		
Houdaille	444247	4,807.97		
Lear	475620	103.51		7,238.83
4. Fort Worth's Costs Remaining to be I.D.L.				11,370.97
				$ 107,914.70
Potential Profit Package				$ 214,654.99

1. Source Memo from F.J. Kenric to G R Sibley dated 8/25/59
2. Source Memo from Spares Estimating dated May 8, 1959
3. Open Commitment List run of 7/31/59 corrected to 8/26/59

4. F.W. Cost Ledger 8/31/59	19,400,137.71
F.W. Cost Excluded in FW-WIP	150,322.74
Corrected F.W.	19,550,460.45
S.D. Cost Ledger 8/31/59	19,539,089.48
	11,370.97

[illegible]

	[illegible]	[illegible]	[illegible]	[illegible]
Target:				
Cost	[illegible]	[illegible]	[illegible]	[illegible]
Profit	[illegible]	[illegible]	[illegible]	[illegible]
Price	[illegible]	[illegible]	[illegible]	[illegible]
Actual:				
Cost	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Target Profit	[illegible]	[illegible]	[illegible]	[illegible]
Incentive: [illegible]				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PROFIT	[illegible]	[illegible]	[illegible]	[illegible]
Cost	[illegible]	[illegible]	[illegible]	[illegible]
Total Price	[illegible]	[illegible]	[illegible]	[illegible]

* [illegible]

*[illegible]	[illegible]
[illegible]	[illegible]
	[illegible]

[illegible]

16·7

[illegible]

10

11

TOTAL

[illegible]

2144638[illegible]

〈 4[illegible] 〉

86377

67745[illegible]

[illegible]2571

[illegible] 4521124

〈1022[illegible]527〉

29907

〈 912[illegible] 〉

14

[illegible]

7.

2873[illegible]

16350

36

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[illegible]

49635

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355670

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71[illegible]

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7666

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03

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< [illegible] >

A/C 16116

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* [illegible] : 465

Order : # 317[illegible]

[illegible] # 317822

2181

GD|C-65-042

(No Master Copy)

GDC-65-042

Inspection and Repair as Necessary (IRAN) Program F-102A and TF-102A Aircraft

Basic Proposal

February 1965

GD|C-65-042

INSPECTION AND REPAIR AS NECESSARY (IRAN) PROGRAM F-102A AND TF-102A AIRCRAFT

BASIC PROPOSAL

February 1965

FOREWORD

This proposal for the F-102A and TF-102A Series aircraft IRAN program is submitted in response to United States Air Force Request For Proposal SA-5-97167.

Convair will establish a separate Convair Service Center immediately adjacent to the parent facility at San Diego to accomplish this IRAN program. Adequate facilities are available for immediate use and for future expansion.

The program will be efficiently implemented by a team well qualified by broad experience in modification, design, operation, and logistic support of F-102 series aircraft. As the program progresses, experienced F-102 personnel in San Diego will be available as required.

The industrial facilities are provided by Convair. Convair plans to use an available work force in accomplishing the required factory operations. Available skills include well-qualified mechanics and inspectors with broad experience in aircraft fabrication and maintenance.

I have selected Mr. E. J. Huntsman, a highly qualified manager in the Convair organization, to manage this important program. Mr. Huntsman and his technical and management staff will bring to the program the administrative capability, knowledge in IRAN concept, and familiarity with the F-102A weapon system necessary to ensure successful program accomplishment.

JH Famme

J. H. Famme
President
General Dynamics/Convair

BASIC PROPOSAL

ORIGINAL

JOINT MESSAGEFORM

RESERVED FOR COMMUNICATIONS CENTER

SECURITY CLASSIFICATION

UNCLASSIFIED

TYPE MSG | BOOK | MULTI | SINGLE

PRECEDENCE

ACTION ROUTINE (MAIL)

INFO

DTG

FROM:

SPECIAL INSTRUCTIONS

TO

GENERAL DYNAMICS/CONVAIR
310 SOUTH ST MARY'S ST
1208 TOWER LIFE BLDG
SAN ANTONIO, TEXAS 78205

38368

SAPAAS-24 FEB 1965

SUBJ: RFP SA-5-97167 issued 29 Jan 65. This is modification number 1 thereto. The hour and date set for receipt of offers is not extended, but remains 445 PM CST, 15 Feb 65. Acknowledgement of this modification is requested with submitted proposal. 1. References to General Provision Nr 22 in Part XIII entitled "Federal, State and Local Taxes" and Part XVI entitled "Los Angeles City License Taxes" are hereby changed to read General Provision Nr 23. 2. References to AFPI 71-597 in Part XIV entitled "Commercial Supplies" are hereby changed to read SAPM 71-94. 3. Instructions and Conditions - Solicitation and Offer on DD Form 1490r (reverse of Cover Page) are hereby amended as follows: (1) Paragraph 3(b) by deleting the words "modified or" in the first line to read "(b) If this solicitation is negotiated, offers may be withdrawn by...."

1 1800Z

Feb 1965

1 2

DRAFTER TYPED NAME AND TITLE

PHONE 5418

J. H. CARPENTER/Buyer/mr

RELEASER SIGNATURE

TYPED NAME AND TITLE

C. L. BALSER, Contracting Officer

SECURITY CLASSIFICATION UNCLASSIFIED

REGRADING INSTRUCTIONS

ORIGINAL

DD FORM 173

REPLACES EDITION OF 1 MAY 55 WHICH

JOINT MESSAGEFORM - CONTINUATION SHEET

SECURITY CLASSIFICATION
UNCLASSIFIED

FROM:

(2) Paragraph 4(a) by changing the first and second lines to read "(a) Offers and Modifications (or withdrawals thereof, if this solicitation is advertised) received at...." 4. DD Form 1423 is amended as follows: (1) RFP No is changed to: SA-5-97167 (2) PR No SA-5-02004 is deleted and the following substituted in lieu thereof: PR No. SA-5-02004 and -1 and SA-6-60000. 5. The clause entitled "Financial Assistance," Part IV, Section II, is deleted, and the following substituted in lieu thereof:

Part IV - PROGRESS PAYMENTS

Unless otherwise specified in Section I of the Schedule, progress payments are not available under this Request for Proposals and bids conditioned upon provision for progress payments will be considered nonresponsive. This does not preclude payments for partial deliveries as otherwise authorized in the Genearl Provisions.

SIGNED

DIRECTORATE OF PROCUREMENT AND PRODUCTION
SAN ANTONIO AIR MATERIEL AREA
KELLY AIR FORCE BASE TEXAS

SYMBOL	PAGE NR	NR OF PAGES	SECURITY CLASSIFICATION	INITIALS
SAPAAS-24	2	2	UNCLASSIFIED	

DD FORM 1 MAY 55 173-1

☆ U. S. GOVERNMENT PRINTING OFFICE: 1955—882281

SOLICITATION AND OFFER

1. SOLICITATION NUMBER
THIS IS AN ADVERTISED SOLICITATION UNDER NUMBER

THIS IS A NEGOTIATED SOLICITATION UNDER NUMBER
RFP SA-5-97167
Class:

2. PURCHASE AUTHORIZATION
SA-5-02004 & -1 and SA-5-60000

3. DATE ISSUED
29 Jan 65

4. ISSUING OFFICE (include address)
Department of the Air Force
Directorate, Procurement & Production
San Antonio Air Materiel Area
Kelly Air Force Base, Texas 78241
FOR ADDITIONAL INFORMATION CALL:
Area Code 512, WA 3-5411, Ext 5544
Buyer: J. H. Carpenter/SAPAAS/cjl

5. SOLICITATION FOR
☐ SUPPLIES
☐ CONSTRUCTION
☒ SERVICES
☐

6. *SEE SCHEDULE FOR PLACE OF PERFORMANCE, FOB POINT, SHIPPING INFORMATION, AND DELIVERY OR PERFORMANCE TIME ALLOWED.*

SOLICITATION

7. Sealed bids *(if this is an advertised solicitation)* or written proposals *(if this is a negotiated solicitation)* in 2 copies for furnishing the supplies or services described herein, or furnishing the labor, equipment and materials and performing all work for the construction project described herein, in strict accordance with the instructions and conditions of this solicitation, the attached schedule, provisions, exhibits, specifications and drawings listed or referred to herein, will be received in the issuing office until 4:45 PM CST 15 Feb 65. If this is an advertised
(Hour, Time Zone and Date)
solicitation, offers will be publicly opened at the above specified time. General instructions and conditions relative to this solicitation are on the reverse side of this form. *OFFERS MUST SET FORTH FULL, ACCURATE, AND COMPLETE INFORMATION AS REQUIRED BY THIS SOLICITATION (Including Attachments). THE PENALTY FOR MAKING FALSE STATEMENTS IN OFFERS IS PRESCRIBED IN 18 U.S.C. 1001.* CAUTION TO OFFERORS - LATE OFFERS. See condition 4 on reverse side entitled "LATE OFFERS AND MODIFICATIONS OR WITHDRAWALS" which provides that late offers and modifications or withdrawals thereof sent through the mails ordinarily will be considered *ONLY IF TIMELY MAILED BY REGISTERED MAIL OR BY CERTIFIED MAIL FOR WHICH A POSTMARKED RECEIPT HAS BEEN OBTAINED AS SPECIFIED.*

8. ADDITIONAL INFORMATION

ADVANCE NOTIFICATION OF THIS PROCUREMENT WAS PUBLISHED IN THE DEPARTMENT OF COMMERCE "SYNOPSIS OF THE U.S. GOVERNMENT PROPOSED PROCUREMENT, SALES AND CONTRACT AWARDS".

OFFER

9. In compliance with the above, the undersigned offers and agrees, if this offer is accepted within 90 calendar days ~~(60~~ *calendar days unless a different period is inserted by the offeror)* from the date for receipt of offers specified in the solicitation above, to furnish any or all of the items upon which prices are offered, at the prices set opposite each item, delivered at the designated point(s) within the time specified in the schedule.

10. DISCOUNT FOR PROMPT PAYMENT AS FOLLOWS:	% 10 CALENDAR DAYS	% 20 CALENDAR DAYS	NET % 30 CALENDAR DAYS	% CALENDAR DAYS

11. OFFEROR REPRESENTS *(Check appropriate boxes)*

a. That the offeror ☐ is, ☒ is not, a small business concern *(see schedule for definition of small business concerns).*

b. If offeror is a small business concern and is not the manufacturer of the supplies offered, offeror also represents that all supplies to be furnished hereunder *(not applicable to construction or services unless so stated in the schedule)* ☐ will be, ☐ will not be, manufactured or produced by a small business concern in the United States, its possessions or Puerto Rico.

c. That offeror is a ☐ regular dealer in, ☒ manufacturer of, the supplies offered *(not applicable to services or construction).*

d. That offeror ☐ has, ☒ has not, employed or retained any company or person *(other than a full-time bona-fide employee working solely for the offeror)* to solicit or secure a contract from this solicitation and offeror ☐ has ☒ has not paid, or agreed to pay any company or person *(other than a full-time bona-fide employee working solely for the offeror)* any fee, percentage, commission, or brokerage fee contingent upon or resulting from the award of a contract resulting from this solicitation; and agrees to furnish information relating to the above as requested by the Contracting Officer. For interpretation of the representation including the term "bona-fide employee" see Code of Federal Regulations, Title 44, Part 150.

e. The offeror represents that he ☒ has, ☐ has not, participated in a previous contract or subcontract subject to either the EQUAL OPPORTUNITY clause herein or the clause originally contained in Section 301 of Executive Order 10925, that he ☒ has, ☐ has not, filed all required compliance reports; and that representations indicating submission of required compliance reports, signed by proposed subcontractors will be obtained prior to subcontract awards. (THE ABOVE REPRESENTATION NEED NOT BE SUBMITTED IN CONNECTION WITH CONTRACTS OR SUBCONTRACTS WHICH ARE EXEMPT FROM THE CLAUSE.)

f. By submission of this offer the offeror certifies in connection with this procurement that:
SEE PART ENTITLED "CERTIFICATE OF INDEPENDENT PRICE DETERMINATION" IN SCHEDULE SECTION II. ~~otherwise required by law, any other offeror or to any competitor; and (c) no attempt has been or will be made to induce any other person or firm to submit or not to submit an offer.~~
~~(2) That he has fully informed himself regarding the accuracy of the statements contained above.~~

g. The estimated percentage of subcontracting contemplated in this offer is 0 percent. (SEE PART ENTITLED "PERCENTAGE OF SUB-CONTRACTING" IN SCHEDULE SECTION II.

h. Offeror operates as a ☒ corporation, incorporated under the laws of the state of Delaware or ☐ a partnership, ☐ an individual, ☐ joint venture, ☐ a nonprofit organization.

12. FULL NAME AND BUSINESS ADDRESS OF OFFEROR *(Street, City, State and Zip Code) (Print or type)*
General Dynamics Corporation
General Dynamics/Convair
3302 Pacific Highway
P.O. Box 1950
San Diego, California 92112

13. TELEPHONE NO. AND AREA CODE
714-296-6611

14. DATE OF OFFER
13 February 1965

15. TYPED OR PRINTED NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER
J. H. Famme
President - General Dynamics/Convair

16. SIGNATURE OF PERSON AUTHORIZED TO SIGN OFFER
J H Famme

INITIALS

INSTRUCTIONS AND CONDITIONS - SOLICITATION AND OFFER

1. PREPARATION OF OFFERS. *(a)* Offerors are expected to examine the drawings, specifications schedule and all instructions. Failure to do so will be at the risk of the offeror.

(b) If this solicitation involves construction, the offeror should visit the site of work and take such action as necessary to ascertain the nature and location of the project and the general and local conditions which can affect the work or cost thereof. Failure to do so will not relieve offerors from responsibility for estimating properly the difficulty or cost of successfully performing the work.

(c) Each offeror shall furnish the information required by the solicitation. Offeror shall print or type his name in the appropriate space on the solicitation. Erasures or changes must be initialed by the person signing the offer. Offers signed by an agent must include evidence of authority attached to offer unless currently effective authority has been previously furnished.

(d) Unit prices and extended prices, when applicable, shall be shown for each item offered and will include packing unless otherwise specified in the solicitation. In case of error in extended price, unit price will govern.

(e) Alternate offers will not be considered unless authorized by the solicitation.

(f) Offeror must state a definite delivery day for furnishing supplies or number of calendar days for performance of services unless otherwise specified in the solicitation.

(g) Time, if stated in numbers of days, will include Saturdays, Sundays and holidays.

2. SUBMISSION OF OFFERS. *(a)* Offers and modifications thereof shall be enclosed in sealed envelopes and addressed to the issuing office. Offeror shall show the hour and date specified in the solicitation for receipt, the solicitation numbers and name and address of offeror on the face of the envelope.

(b) If this solicitation is advertised, telegraphic offers will not be considered unless authorized by the solicitation, however, offers may be modified by telegraphic ce, provided such notice is received prior to hour and date specified for receipt. legraphic offer under a negotiated solicitation will be considered if received by the hour and date specified.

(c) If no offer is to be submitted, do not return the solicitation unless otherwise specified. A letter or postcard should be sent to the issuing office advising whether future solicitations for the type of supplies or services covered by this solicitation are desired.

3. MODIFICATION OR WITHDRAWAL OF OFFERS. *(a)* If this solicitation is advertised, offers may be modified or withdrawn by written or telegraphic notice received prior to the exact hour and date specified for receipt of offers. An offer may be withdrawn in person by an offeror or his authorized representative, provided his identity is made known and he signs a receipt for the offer, but only if the withdrawal is made prior to the exact hour and date set for receipt of offers.

(b) If this solicitation is negotiated, offers may be modified or withdrawn by written or telegraphic notice received at any time prior to award. Offers may be withdrawn in person by an offeror or his authorized representative, provided his identity is made known and he signs a receipt for the offer prior to award.

4. LATE OFFERS AND MODIFICATIONS OR WITHDRAWALS. *(a)* Offers *(and modifications or withdrawals thereof, if this solicitation is advertised)* received at the office designated in the solicitation after the exact hour *(or close of business if this solicitation is negotiated and no hour is specified)* and date specified for receipt will not be considered unless: *(i)* they are received before award is made, and either *(ii)* they are sent by registered mail, or by certified mail for which an official dated post office stamp *(postmark)* on the original Receipt for Certified Mail s been obtained, or by telegraph if authorized; and it is determined by the Govern- t that the late receipt was due solely to delay in the mails, or delay by the egraph company for which the offeror was not responsible, or *(iii)* if submitted by mail *(or by telegram if authorized)* it is determined by the Government that the late receipt was due solely to mishandling by the Government after receipt at the Government installation, provided, that timely receipt at such installation is established upon examination of an appropriate date or time stamp *(if any)* of such installation, or of other documentary evidence of receipt at such installation *(if readily available)* within the control of such installation or of the post office serving it. However, a modification of an offer which makes the terms of the otherwise successful offer more favorable to the Government will be considered at any time it is received and may thereafter be accepted.

(b) Offerors using certified mail are cautioned to obtain a Receipt for Certified Mail showing a legible, dated postmark and to retain such receipt against the chance that it will be required as evidence that a late offer was timely mailed.

(c) The time of mailing of late offers submitted by registered or certified mail shall be deemed to be the last minute of the date shown in the postmark on the registered mail receipt or registered mail wrapper or on the Receipt for Certified Mail unless the Offeror furnishes evidence from the post office station of mailing which establishes an earlier time. In the case of certified mail, the only acceptable evidence is as follows: *(1)* where the Receipt for Certified Mail identifies the post office station of mailing, evidence furnished by the offeror which establishes that the business day of that station ended at an earlier time, in which case the time of mailing shall be deemed to be the last minute of the business day of that station; or *(2)* an entry in ink on the Receipt for Certified Mail showing the time of mailing and the initials of the postal employee receiving the item and making the entry, with appropriate written verification, in which case the time of mailing shall be the time shown in the entry. If the postmark on the original Receipt for Certified Mail does not show a date, the offer shall not be considered.

5. QUALIFICATION OF OFFEROR. Prior to award offeror may be requested to submit a statement regarding experience, financial responsibility, technical organiaation and facilities available to perform the work.

6. GUARANTEE OF OFFER. Failure to furnish a guarantee *(if required)* in the proper amount and in the form of a firm commitment such as a "Bid Bond", postal money order, cashiers check, certified check, irrevocable letter of credit or United States Bonds or notes in accordance with Treasury Department regulations, may be cause for rejection of offer. Guarantees other than "Bid Bonds" will be returned to *(a)* unsuccessful offerors after opening offers, and to *(b)* successful offeror upon execution of such documents and bonds required by offer as accepted. Withdrawal of offer or failure to enter into a contract and give bonds within time specified shall cause the guarantee to be forefeited to the extent required to offset any difference by which the cost of procuring the supplies or services exceeds the amount of the offer.

7. LABOR INFORMATION. Certain public laws and acts may apply to a contract resulting from this solicitation. Clauses set forth in the General Provisions attached to this solicitation indicate the appropriate laws or acts applicable to this solicitation. Clarification or additional information may be obtained from the office or agency issuing the solicitation or from the Wage and Hour and Public Contracts Divisions, Department of Labor, Washington, D. C. 20210, or from any of the division's offices throughout the various states. It is important that requests for information include the solicitation number, name and address of the issuing office, and a description of the supplies, services or construction.

8. DISCOUNTS. *(a)* Prompt-payment discounts will be included in the evaluation of offers provided the period of the offered discount is sufficient to permit payment within such period in the regular course of business under provisions of the solicitation.

(b) In connection with any discount offered, time will be computed from date of delivery of the supplies to the F.O.B. point or from date correct invoice or voucher is received in the office specified by the Government if the latter date is later than the date of delivery. Payment is deemed to be made, on the date of mailing of the Government check.

9. AWARD OF CONTRACT *(a)* The contract will be awarded to that responsible offeror whose offer conforming to the solicitation will be most advantageous to the Government, price and other factors considered.

(b) The Government reserves the right to reject any or all offers and to waive informalities and minor irregularities in offers received.

(c) The Government may accept any item or group of items of any offer, unless the offeror qualified his offer by specific limitations. *UNLESS OTHERWISE PROVIDED IN THE SCHEDULE, OFFERS MAY BE SUBMITTED FOR ANY QUANTITIES LESS THAN THOSE SPECIFIED; AND THE GOVERNMENT RESERVES THE RIGHT TO MAKE AN AWARD ON ANY ITEM FOR A LESSER QUANTITY THAN STATED, AT THE UNIT PRICES OFFERED, UNLESS THE OFFEROR SPECIFIED OTHERWISE IN HIS OFFER.*

(d) A written award *(or Acceptance of Offer)* mailed *(or otherwise furnished)* to the successful offeror, within the time for acceptance specified in the offer shall be deemed to result in a binding contract without further action by either party.

The following paragraphs *((e) through (h))* apply only to negotiated solicitations:

(e) The Government may accept within the time specified therein, any offer *(or part thereof, as provided in (c) above)*, whether or not there are negotiations subsequent to its receipt, unless the offer is withdrawn by written notice received by the Government prior to acceptance. If subsequent negotiations are conducted, they shall not constitute a rejection or counter offer on the part of the Government.

(f) The right is reserved to accept other than the lowest proposal and to reject any or all proposals.

(g) Pursuant to 10 U.S.C. 2304(g), the Government may award a contract, based on initial offers received, without discussion of such offers. Accordingly, each initial offer should be submitted on the most favorable terms from a price and technical standpoint which the offeror can submit to the Government.

(h) Any cost or financial analysis data submitted with any proposal hereunder, or any representation concerning facilities or financing shall not form a part of any resulting contract.

10. INVOICES. Invoices shall be prepared and submitted in quadruplicate *(one copy shall be marked "original")* unless otherwise specified. Invoices shall contain the following information: Contract and order number *(if any)*, item numbers, description of supplies or services, sizes, quantities, unit prices, and extended totals. Bill of lading number and weight of shipment will be shown for shipments made on Government bills of lading.

11. INCONSISTENCIES. Unless otherwise specified elsewhere, any inconsistency between provisions of this solicitation shall be resolved by giving precedence in the following order: *(1)* the Schedule; *(2)* Instructions and Conditions - Solicitation and Offer; *(3)* General Provisions, *(4)* other provisions of the solicitation, whether incorporated by reference or otherwise; *(5)* the Specifications.

12. CERTIFICATION OF NONCOLLUSION. *(a)* This certification on the offer form *(Item 11f)* is not applicable to a foreign offeror submitting an offer for a contract which required performance or delivery outside the United States, its possessions, and Puerto Rico.

(b) An offer will not be considered for award where *(1)(a)*, *(1)(c)* or *(2)* of the certification has been deleted or modified. Where *(1)(b)* of the certification has been deleted or modified, the offer will not be considered for award unless the offeror furnished with the offer a signed statement which sets forth in detail the circumstances of the disclosure and the head of the agency, or his designee determines that the disclosure was not made with collusive intent.

TABLE OF CONTENTS

This Solicitation consists of the following:

(a) DD Form 1490, 1490r and Table of Contents

(b) Section I, 20 Pages

(c) Section II, 12 Pages

(d) DD Form 1423, 1 Mar 63 (1 page), w/Forms 9 attached (12 pages)

(e) DD Form 254, 1 May 60 (5 pages)

(f) Attachment(s):
1. F102 SRA Age Requirements (Minus JEFM) (13 Pages)
2. F-102 SRA JEFM Age Requirements (15 Pages)

(g) SAPM 71-94, 5 Nov 64

(h) General Provisions as follows:

1. Standard Form 32, June 1964
2. SAPM 71-18, 18 Jan 1965
3. SAPM 71-18a, 22 Jan 1965
4. MCP 71-76, Jul 60
5. SAPM 71-39, 7 Oct 64
6. SAPM 71-61, 26 Jan 1965
7. SAPM 71-67, 7 Oct 64
8. SAPM 71-68, 20 Jun 1963
9. SAPM 71-69, 1 July 1963
10. SAPM 71-71, 7 Oct 1964
11. SAPM 71-72, 7 Oct 1964
12. SAPM 71-81, 10 Dec 63

(i) SAPM 71-76c, 18 Nov 1964

(j) Appendices:

Appendix "A", dated 1 Sep 64 and Interim Revision Nr. 1, dated 30 Sep 64, both entitled "Work Specification for IRAN and Modification F/TF-102A Type Aircraft" and Supplement Nr. 1 dated 1 Sep 64 "Work Specification Maintenance Compression Requirements for F/TF-102 Type Aircraft". All File Nr. SA/F/TF-102A/7.

Appendix "B", dated 1 Sep 64, "Supply Information Type Work IRAN and Modification Type Aircraft or Equipment F/TF-102A" File Nr. SA/F/TF-102A/7

* All items listed above are incorporated in this Proposal by this Reference, if not otherwise specifically included.

OF SA-5-97167

SCHEDULE/CONTINUATION SHEET

ISSUED BY Directorate, Procurement & Production
SAAMA, Kelly AFB, Texas

NAME OF BIDDER OR CONTRACTOR

MARK ALL PACKAGES AND PAPERS WITH CONTRACT AND/OR ORDER NUMBER

ITEM NO.	QUANTITY (No. of Units)	UNIT	UNIT PRICE	SCHEDULE OF SUPPLIES OR SERVICES	AMOUNT	QUANTITY ACCEPTED

PART I - STATEMENT OF WORK:

A. The Contractor shall furnish all plant, services, labor and indirect materials as defined in Part III hereof necessary to accomplish IRAN (Inspect and Repair as Necessary) as defined in T.O. 00-25-4. Included are Examination and Inspection (E & I), Repair/Replacement of defective items or components, Technical Order Compliance Inspection, Modification and Periodic Inspection, Pre flight and Post flight inspection and delivery of 256 each F/TF-102A aircraft at the quantity rate and prices set forth. The IRAN shall be accomplished and supplies furnished in accordance with Appendix "A" dated 1 September 1964 and Interim Revision Nr. 1 dated 30 September 1964 both entitled "Work Specification for IRAN and Modification, F/TF-102A Type Aircraft"; Supplement Nr. 1 to Appendix "A" dated 1 September 1964 entitled "Work Specification, Maintenance Compression Requirements for F/TF-102 Type Aircraft"; and Appendix "B" dated 1 September 1964 entitled "Supply Information, Type Work IRAN and Modification of F/TF102A Type Aircraft" all of which Appendices designated File Nr. SA/F/TF102A/7 are incorporated herein by reference and hereby made a part hereof.

(1) The Basic IRAN covered under the fixed prices of Items 1, 1a, 2 and 2a shall include the receipt of the aircraft; E & I of aircraft, Engine and Systems inspection, including the removal and replacement of the engine; Washing and cleaning; Draining and purging of fuel tanks; Dearming and making safe all accessories/equipment; Circuit analysis of electrical wiring including circuitry outside of the "black boxes"; Repair/Replacement and/or Reinstallation of accessories/equipment; Pre flight and post flight inspection and correction of defects of the maintenance cycle; Touch-up painting; and delivery of the aircraft to the Air Force fully serviced and ready for take-off and flight to destination.

(2) In the event it becomes necessary for the Government to direct the implementation of Supplement Nr. 1 to Appendix "A", the fixed prices set forth for Items 1, 1a, 2 and 2a shall automatically be determined not applicable and services required under Items 1, 1a, 2 and 2a shall be performed under the Work Request procedure. In no instance will the price thereafter negotiated with the ACO exceed that agreed upon under the basic contract unless overtime, shift differential, or other increased costs of like nature be required.

The Government will furnish to the Contractor the following aircraft upon which work will be performed as hereinafter set forth:

Fixed Unit Price

ITEM 1

Basic IRAN of F/102A aircraft based on a total quantity of 9 each.

BID A	$ 25,427
BID B	$ 25,243

ITEM 1a

Basic IRAN of F/102A aircraft based on a total quantity of 209 each

BID A	$ 10,817
BID B	$ 10,738

ITEM 2

Basic IRAN of TF/102A aircraft based on a total quantity of 3 each.

BID A	$ 25,427
BID B	$ 25,243

ITEM 2a

Basic IRAN of TF/102A aircraft based on a total quantity of 35 each.

BID A	$ 10,817
BID B	$ 10,738

(3) The Government reserves the right to vary the quantities of aircraft set forth in Items 1, 1a 2 and 2a above by the issuance of a Change Order provided the total quantity of 256 aircraft remains unchanged. Such change will be at the unit price set forth for said Items 1, 1a, 2 and 2a.

B. The Contractor shall furnish all plant, services, labor and indirect material as defined in Part III hereof to accomplish the additional items of work set forth under Items 3 through 78 as applicable. After receiving inspection, the Contractor shall identify to the ACO those tasks set forth under Items 3 through 78 for each aircraft which are necessary to bring said aircraft up to satisfactory acceptance. The Contractor shall perform the work, as approved in writing by the ACO, in accordance with the provisions of applicable Appendices "A" and "B" as referenced in Paragraph A hereof at the fixed unit price set forth for each item herein.

Unit Price

ITEM 3

Complete Strip and paint as directed under Section II, Paragraph 3e of Appendix "A".

BID A	$ 1,647
BID B	$ 1,647

ITEM 4 Unit Price

Engine Build-up as directed under Section II, Paragraph 1j(14)

BID A	$	307
BID B	$	305

ITEM NO.	SEVERABLE TASK		UNIT PRICE BID A	UNIT PRICE BID B
	Time Chg Items (1F-102A-6)			
5.1	System 13 Item 1		$ 8	$ 8
5.2	System 14 Item 1		5	5
5.3	System 14 Item 2		22	22
5.4	System 23 Item 2		8	8
5.5	System 23 Item 3		11	11
5.6	System 23 Item 4		176	176
5.7	System 41 Item 1		5	5
5.8	System 41 Item 2		16	16
5.9	System 45 Item 1		22	22
5.10	System 45 Item 2		5	5
5.11	System 45 Item 3		3	3
5.12	System 47 Item 1		5	5
5.13	System 47 Item 2		3	3
5.14	System 47 Item 3		1	1
5.15	System 97 Item 1		3	3
5.16	System 97 Item 2		3	3
5.17	System 97 Item 3		3	3
5.18	System 97 Item 4		5	5
5.19	System 97 Item 5		5	5
5.20	System 97 Item 6		1	1
5.21	System 97 Item 7		5	5
	TCTO's			
6	1F-1-589	3 May 1963	$ 5	$ 5
7	1F-102-649	4 March 1958	22	22
7.1	1F-102-649A	23 July 1958	-0-	-0-
8	1F-102-695	23 March 1960	5	5
8.1	1F-102-695A	23 March 1960	-0-	-0-
9	1F-102-713	3 February 1961	154	154
9.1	1F-102-713E	3 February 1961	275	275
9.2	1F-102-713F	19 June 1961	-0-	-0-
9.3	1F-102-713G	16 November 1961	-0-	-0-
10	1F-102-714	18 May 1959	214	214
11	1F-102-761	29 January 1959	71	71
11.1	1F-102-761E	1 February 1961	-0-	-0-
11.2	1F-102-761F	31 May 1961	-0-	-0-
11.3	1F-102-761G	24 April 1962	22	22
12	1F-102-763	30 December 1958	110	110
12.1	1F-102-763A	22 June 1959	22	22

ITEM NO.	SEVERABLE TASK		UNIT PRICE	
			BID A	BID B
13	1F-102-893	31 January 1961	60	60
13.1	1F-102-893A	1 February 1961	5	5
13.2	1F-102-893B	1 May 1961	5	5
14	1F-102-915	1 April 1963	99	99
15	1F-102-918	30 June 1961	154	154
16	1F-102-919	3 April 1961	110	110
16.1	1F-102-919A	24 April 1961	60	60
16.2	1F-102-919B	2 March 1962	-0-	-0-
16.3	1F-102-919C	17 October 1962	-0-	-0-
16.4	1F-102-919D	28 February 1963	-0-	-0-
17	Deleted			
18	1F-102-933	31 May 1962	33	33
19	1F-102-949	30 November 1962	60	60
20 *	1F-102-951	15 March 1964	60	60
21 **	1F-102-954	6 January 1964	291	291
22	1F-102-956	5 March 1962	5	5
23	1F-102-972	27 February 1962	231	231
23.1	1F-102-972C	28 February 1963	121	121
24	1F-102-976	14 June 1963	165	165
25	1F-102-977	9 July 1962	351	351
25.1	1F-102-977A	23 April 1963	-0-	-0-
26	1F-102-986	30 November 1962	11	11
27	1F-102-990	15 April 1963	148	148
27.1	1F-102-990B	27 January 1964	5	5
28	1F-102-999	31 October 1963	16	16
28.1	1F-102-999C	25 March 1964	5	5
29	1F-102-1006	10 April 1963	11	11
30	1F-102-1007	21 September 1962	55	55
31	1F-102-1009	15 November 1962	16	16
32	1F-102-1010	26 October 1962	5	5
33	1F-102-1011	22 March 1963	16	16
34	1F-102-1012	31 May 1963	121	121
35	1F-102-1015	5 November 1962	33	33
36	1F-102-1017	4 June 1963	27	27
36.1	1F-102-1017C	5 March 1964	5	5
37	1F-102-1018	5 April 1963	16	16
38	1F-102-1021	21 January 1963	60	60
38.1	1F-102-1021A	6 January 1964	-0-	-0-
39	1F-102-1023	30 January 1963	5	5
40	1F-102-1024	15 July 1963	181	181
41	1F-102-1025	10 July 1964	38	38
42	1F-102-1026	10 April 1964	16	16
42.1	1F-102-1026C	20 August 1964	11	11
43	1F-102-1027	28 Februaty 1963	11	11
44	1F-102-1031	24 June 1963	5	5
* 20.1	1F-102-951C	2 October 1964	11	11
** 21.1	1F-102-954A	25 February 1964	-0-	-0-

ITEM NO.	SEVERABLE TASK		UNIT PRICE	
			BID A	BID B
45	1F-102-1039	4 June 1963	5	5
46	1F-102-1041	5 June 1963	22	22
47.	1F-102-1045	21 January 1964	11	11
48	1F-102-1048	19 July 1963	104	104
49	1F-102-1049	6 August 1963	11	11
50	1F-102-1050	10 September 1963	16	16
51	1F-102-1051	15 April 1964	93	93
52	1F-102-1052	31 December 1963	22	22
53	1F-102-1053	20 December 1963	11	11
54	1F-102-1055	27 September 1963	5	5
55	1F-102-1057	16 September 1963	5	5
56	1F-102-1059	5 March 1964	44	44
57	1F-102-1065	13 November 1964	16	16
58	1F-102-1066	22 April 1964	11	11
58.1	1F-102-1066C	29 June 1964	5	5
59	1F-102-1067	20 January 1964	33	33
60 *	1F-102-1068	20 April 1964	11	11
61	1F-102-1069	3 April 1964	82	82
62	1F-102-1073	8 May 1964	66	66
63	1F-102-1074	22 May 1964	11	11
64	1F-102-1076	2 July 1964	16	16
65	1F-102A-562	25 March 1960	60	60
66	1F-102A-571	13 September 1957	60	60
67	1F-102A-595	16 February 1959	11	11
68	1F-102A-621	26 May 1960	55	55
68.1	1F-102A-621B	31 August 1961	11	11
69	1F-102A-622	14 September 1960	99	99
69.1	1F-102A-622A	22 January 1962	-0-	-0-
69.2	1F-102A-622B	12 October 1962	-0-	-0-
70	1F-102A-628	1 February 1962	22	22
71	1F-102A-633	18 June 1963	33	33
72	1F-102A-634	10 July 1963	22	22
73	1F-102A-635	15 April 1964	38	38
74	1F-102A-636	29 April 1964	16	16
75	1F-102(T)A-547	24 November 1961	49	49
76	1F-102(T)A-549	1 May 1962	49	49
77	1F-102(T)A-551	1 June 1962	5	5
78	1F-102(T)A-552	26 October 1962	16	16
*60.1	1F-102-1068C	23 October 1964	5	5

4

C. The Contractor shall furnish all plant, labor, services and indirect materials as defined in Part III hereof necessary for severable type items of work when a Work Request is issued by the ACO in accordance with Part IV of the Schedule. The hourly rate proposed under Items 79 through 81 shall be same for each item.

ITEM 79, Miscellaneous Maintenance and Repair Requirements:

The Contractor may be required by the Government to perform miscellaneous maintenance and repair tasks such as crash damage repair, corrosion repair and treatment, repair of components and accessories, accomplishment of additional technical orders, maintenance and repair of Aerospace Ground Equipment (AGE), accomplishment of Maintenance Compression Requirements under Supplement Nr. 1 of Appendix "A" and/or any other additional work not called for elsewhere in the contract. Such additional work will be authorized by the ACO through the issuance of work requests, pursuant to Part IV hereof. The prices for the accomplishment of work requirements hereunder shall be negotiated by and between the ACO and the Contractor, and shall be based upon the fixed hourly rate as accepted by the Government in the amount of:

BID A $ 5.49 per hour
BID B $ 5.49 per hour

ITEM 80, Repair of Government-Furnished Property:

The Contractor may be required by the Government to perform necessary repair work on Government-furnished property which may have sustained damage in transit or which was found to be defective when received. Such repair work will be authorized by the ACO through the issuance of "Work Requests" pursuant to Part IV hereof. The prices for the accomplishment of work requirements hereunder shall be negotiated by and between the ACO and the Contractor, and shall be based upon the fixed hourly rate as accepted by the Government in the amount of:

BID A $ 5.49 per hour
BID B $ 5.49 per hour

ITEM 81, Excess Government-Furnished Property and Air Force Equipment:

Pursuant to Section IV of Appendix "B" attached hereto and the clause of this contract entitled "Government Furnished Property", the Air Force Equipment as defined in Part entitled "Air Force Equipment" of the Schedule hereof, the costs incurred by the Contractor in effecting disposition of excess Government Furnished Property and Air Force Equipment in accordance with instructions received from the ACO shall be negotiated by and between the ACO and the Contractor, and shall be based on the fixed hourly rate as accepted by the Government in the amount of:

BID A $ 5.49 per hour
BID B $ 5.49 per hour

Item 82. Reimbursable Material:

The Contractor shall furnish the following upon approval of the ACO.

Item 82a. The direct materials as defined in Part IV hereof required for the performance of the contract and referenced in Appendix "B" and identified as Local Purchase (LP) Materials. The estimated cost to the Government of the supplies to be furnished hereunder by the Contractor is $__________ FY 1965 and $__________ FY 1966. (To be inserted by the Government at time of award.)

Item 82b. The Contractor shall furnish the supplies under CP (Central Procurement) under Appendix "B", attached hereto, to the extent the Government is unable to furnish same, provided the need for the Contractor to furnish such supplies is verified by the Contracting Officer. The cost of supplies so furnished shall be chargeable to this contract item, and Contractor's invoices or vouchers submitted for payment shall contain sufficient information to identify the supplies furnished under this item. The estimated cost to the Government of the supplies to be furnished hereunder by the Contractor is $__________ FY 1965 and $__________ FY 1966. (To be inserted by the Government at time of award.)

DATA

Enter total cost of all data items individually priced on attached DD Form 1423 (See clause entitled Data Pricing)

ITEM 83a

Total cost of data items set forth on attached DD 1423 for 12 aircraft FY 65

BID A $ 4,304
BID B $ 4,304

ITEM 83b

Total cost of data items set forth on attached DD 1423 for 244 aircraft FY 66

BID A $ 80,374
BID B $ 80,374

PART II - FUEL AND LUBRICANTS:

A. Notwithstanding Appendix "B", the Contracting Officer shall determine whether fuel and lubricant referenced in Section I, Paragraph 1a(3)(d) will be Government-furnished or contractor-furnished. Offer shall indicate below the unit prices for Fuel and Lubricant.

Mil-J-5624F JP4 Fuel per gallon $ .13
Mil-L-23699 Lubricant per gallon $ 8.78

B. The Contracting Officer has determined that fuel and lubricant shall be ____________________. (Blank to be filled in at time of award.)

C. If Paragraph "B" above shows fuel and lubricants to be Contractor furnished, the furnishing thereof shall be a reimbursable item of direct material pursuant to Part III of the schedule.

D. The handling and storage of fuel shall be as set forth in the Work Specifications attached hereto.

PART III - CONSIDERATION:

A. The Government will pay the Contractor in accordance with General Provision Nr. 7 and Part I hereof for satisfactory performance of the work and/or services set forth in Items 1 through 81 and 83, Part I of this Schedule. In addition, the Government will reimburse the Contractor for direct materials furnished by the Contractor under Item 82 of Part I hereof and fuels and lubricants if specified "Contractor Furnished" in Part II of the Schedule, in accordance with the following:

1. Direct materials for reimbursement purposes is hereby defined as those items which the Contractor, with the approval of the ACO, purchases, supplies from stock or manufactures and specifically identifies for the performance of this contract with the intention of entering them into or making them a part of the aircraft. Such items shall be identified with and have application to the operational function of said aircraft. In addition, for the purpose of this contract, aircraft fuel and oil, paint stripper, and the materials used in preservation, packaging, packing, repair and/or furnishing of shipping containers shall be considered direct materials and reimbursable under this clause. Any item other than those specified and mentioned herein, which is necessary in processing the aircraft to the point of acceptance by the Government, shall not be included in the definition of "Direct Materials" for reimbursement purposes.

2. All indirect materials necessary in performance of the work required shall be furnished by the Contractor. Indirect materials are defined as all items which do not fall within the definition of direct materials as set forth in paragraph A.1, Part III above. Cost for indirect materials is included in the unit price(s) and hourly rate as specified in Part I.

3. Direct materials furnished from the Contractor's stock or required to be procured by the Contractor will be paid on a cost basis provided; however, reimbursement shall be limited to vendor's invoice price plus transportation charges only. Whenever the Contractor shall demonstrate to the satisfaction of the Contracting Officer that the fabrication of required materials or items is more advantageous to the Government that the purchase thereof, the Contractor shall fabricate such materials or items in accordance with applicable specifications. In such event and prior to the substantial completion of the work, the ACO will negotiate with the Contractor a price which is considered fair and reasonable under the circumstances for such fabrication, considering such factors as the urgency of the requirement, the quantity to be procured, the normally higher cost of fabricating on a model shop basis, etc. It being understood that:

(a) The cost-plus-a-percentage of cost system of contracting shall not be used by the Contractor in procuring articles, materials, supplies or services required for the performance of this contract.

(b) No contract or purchase order which is for materials reimbursable hereunder which could in any manner exceed in dollar value $25,000.00 shall be placed without the prior approval of the ACO and unless the Contractor's purchasing system shall have been approved by the ACO, the Contractor shall not, without the written approval of the ACO make any contract of purchase order for the furnishing of materials reimbursable hereunder.

(c) The Contractor agrees to support all such materials charges by paid invoices. The Contractor shall submit sales invoices for those items it has been authorized to fabricate to the Contracting Officer for approval. Such invoices shall bear on the face thereof reference to the negotiations which established the unit price reflected thereon. One copy of all Contractor purchase orders for material for which the Contractor is entitled to reimbursement will be forwarded to SANCPA.

(d) Any billings rendered by the Contractor for materials and supplies purchased and/or fabricated hereunder, shall contain a certification by an authorized representative of the Contractor that such materials and supplies were actually required in the performance of this contract.

PART IV - WORK REQUEST:

(a) Pricing Procedures for Inseverable Type Work. The contractor shall notify the Contracting Officer, in writing, of work that is required to be performed under item(s) N/A hereof, promptly after such work is encountered. The Contracting Officer will indicate his concurrence as to the extent of the work to be performed by issuing a work request. The contractor should furnish a quotation for the work to be performed within 30 days after receipt of the work request, and the parties shall forthwith commence negotiations to arrive at a reasonable price and delivery schedule therefor. Upon agreement an amendment to the work request shall be issued setting forth the agreed prices and delivery schedules.

(b) Ordering of Additional Work - Severable. The following procedure will be used to order additional work of the type covered by Item(s) 79, 80 and 81 of the contract. Such work will be called for by the issuance of work requests. It is agreed that work requests may be issued at the sole option of the Contracting Officer during the term of the contract, and that the Government has no obligation under this paragraph (b) to issue any such work request. Upon receipt of a work request, the Contractor shall quote a price and delivery schedule for the work called for but shall not proceed with the work until such price is approved by the Contracting Officer, provided, however, whenever the Contracting Officer determines that it is in the interest of the Government to not delay performance of the work until a price is negotiated, he may specify in the work request that the Contractor is authorized to proceed forthwith. Within 30 days after receipt of such order, and in every case prior to completion of the work called for therein, the parties shall negotiate a price and delivery schedule for the work order, and the work request shall be amended accordingly.

(c) Work requests issued under paragraphs (a) or (b) above shall bear the number of this contract, be serially numbered, dated and signed by the Contracting Officer. They shall set forth the work to be performed and shall refer to the contract item pursuant to which the request was issued. They shall include, or be amended to include the price of the work and the delivery schedule therefor. In addition, work requests issued under paragraph (b) above shall cite the funds allotted for payment of the work ordered thereby. The provisions of the contract shall be applicable to all work requests issued under this clause. Failure to agree upon a reasonable price shall be considered a "dispute concerning a question of fact" within the meaning of the clause of this contract entitled "Disputes". Amendments to work requests may be issued subject to the same conditions as the original work request. The contractor's concurrence as to the terms of the work request or amendment, will be evidenced by signing the respective document. The term "work" as used herein includes both supplies and services to the extent covered by the referenced contract item.

PART V - ITEMS BEYOND ECONOMICAL REPAIR:

If, after determining the extent of repairs, modification and technical order compliance required, it is the Contractor's opinion that an item or component is not economically reparable, he shall notify the Administrative Contracting Officer to this effect and await disposition instructions. If the disposition instructions are other than to complete repairs, etc., the Contracting Officer and the Contractor shall negotiate a price for the work in connection with determining the non-reparable status and in connection with the disposition of the item.

PART VI - DELIVERY:

A. The aircraft Input under Items 1 and 2 of Part I hereof shall be delivered by the Government to the Contractor at the point specified in Part VIII hereof. The Contractor shall be required to process said aircraft as required herein and make delivery thereof to the Government, in accordance with the following:

DESIRED DELIVERY SCHEDULE

ACFT SEQUENCE NR.	INPUT DATE*	OUTPUT DATE**	FLOW TIME***
1	15 Mar 65	5 Aug 65	144 Calendar Days
2 (TF102)	15 Mar 65	5 Aug 65	144
3	19 Apr 65	12 Aug 65	115

(Cont'd)

ACFT SEQUENCE NR.	INPUT DATE*	OUTPUT DATE**	FLOW TIME***
4	7 May 65	17 Aug 65	103 Calendar Days
5	20 May 65	23 Aug 65	96
6(TF102)	28 May 65	25 Aug 65	90
7	7 Jun 65	30 Aug 65	85
8	11 Jun 65	30 Aug 65	81
9	17 Jun 65	31 Aug 65	76
10	22 Jun 65	2 Sep 65	73
11	28 Jun 65	7 Sep 65	72
12(TF102)	30 Jun 65	7 Sep 65	70

* Input date is the date IRAN work actually begins. Aircraft will arrive one or two work days prior to the input date.

** Output date is the date the aircraft is successfully test flown and accepted by the Air Force.

*** Flow time begins on the input date and ends on the output date. In includes both dates.

Accelerated deliveries are acceptable but such deliveries will have no effect on the input schedule.

B. The aircraft input under Items 1a and 2a of Part I hereof shall be delivered by the Government to the contractor at the point specified in Part VIII hereof. The Contractor shall be required to process said aircraft as required herein and make delivery thereof to the Government in accordance with the following:

Schedule:

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
IN	9	13	18	20	23	23	23	23	23	23	23	23	-	-	-	244
OUT			13	16	19	22	24	22	25	23	22	25	21	12	-	244

Specific input and output dates are subject to negotiation. Flow time is estimated to begin at 47 work days and to be progressively reduced to 33 work days for the 26th and subsequent inputs. Ratio of F-102A to TF-102A is approximately 7 to 1; input spacing will approximate this ratio.

* The alternate master schedule provided in the supplemental information is not part of the basic proposal; it is offered only for cost comparison.

ACCELERATED DELIVERY (FEB. 1960)

The Contractor is authorized toexceed the delivery rate, or to complete performance of this contract prior to the time therefor, set forth in the schedule; provided, however, that nothing contained herein shall obligate the Government to perform any of its obligations to the Contractor at an earlier date than is set forth in this contract in order to assist the Contractor to make deliveries on an accelerated basis.

PART VII - GENERAL PROVISION NO. 48(c) PAYMENTS:

(a) The item in the schedule referenced in Paragraph (c) on Page 18 of SAPM 71-18 dated 18 Jan 1965, Alteration to Payments Clause of the General Provision, is identified as Item 82b.

(b) The negotiation of prices contemplated by paragraph (c), Page 18 of SAPM 71-18 dated 18 Jan 1965, shall be as set forth in Part III(a)(3) of the schedule entitled "Consideration".

PART VIII - F.O.B. POINT:

A. The F.O.B. Point for delivery of aircraft to the Contractor and the return thereof by the Contractor to the Government shall be at the aircraft landing facilities used by the Contractor at Lindbergh Field, San Diego, California.

B. The delivery of Government Furnished Property to the Contractor, the return of Government Furnished Property and the delivery of supplies to the Government shall be F.O.B. Carrier's Equipment at or near the Contractor's plant at 3302 Pacific Highway, San Diego, California.

PART IX - INSPECTION AND ACCEPTANCE:

A. Final inspection and acceptance of the aircraft listed herein shall be at the aircraft landing facilities used by the Contractor at Lindbergh Field, San Diego, California.

B. Final inspection and acceptance of the articles listed herein shall be at the Contractor's plant or plants as designated by the Contractor. (Offeror will designate point or points of inspection and acceptance):

San Diego	California
(City)	**(State)**

PART X - AIR FORCE EQUIPMENT:

For purposes of any contract resulting from this solicitation, the items to be furnished by the Government, upon which repair and/or overhaul is to be performed by the Contractor, shall be considered "Air Force Equipment" as distinguished from "Government Furnished Property".

PART XI - PRESERVATION AND PACKING:

In accordance with Section VI of Appendix "B" and attachments thereto.

PART XII - QUALITY PROGRAM (July 1964)

The contractor shall provide and maintain a quality program acceptable to the Government for supplies or services covered by the contract. The quality program shall be in accordance with Military Specification MIL-Q-9858A.

CONTROL OF NONCONFORMING SUPPLIES:

The procedures in USAF Specification Bulletin Nr. 515 will apply in the control and disposition of nonconforming supplies.

PART XIII - DELIVERY OF AIRCRAFT:

Unless otherwise provided in this contract:

(a) All aircraft shall be delivered completely set up, serviced, tested and ready for flight at the flying field where they are to be finally inspected.

(b) The Contractor shall furnish all fuel, oil and cooling fluid necessary (i) for engine tests and flight tests required to be made under the provisions of Military Specification MIL-A-8730A (USAF) dated 14 April 1958 plus any amendment thereof set forth in the schedule and (ii) for fly-away in amounts designated by the ferry pilot, for each aircraft delivery. Amendment 4 dated 17 October 1961 is applicable to MIL-A-8730A.

PART XIV - SECURITY REQUIREMENTS:

The security clearance required of Contractor personnel handling equipment on this contract will be consistent with the classification of the equipment or matters involved. DD Form 254 "Security Requirements Check List" dated 1 Sept 64 is attached hereto and hereby made a part hereof and will be complied with.

PART XV - EVALUATIONS OF PROPOSALS:

1. Proposals submitted as a result of this Request for Proposals will be evaluated in accordance with the regulations pertaining to negotiated procurements. Award of contract shall be in accordance with the applicable terms and conditions on the reverse of the cover page and as further specifically provided herein. Any contract resulting from this Request for Proposals shall be awarded to the offeror with whom the lowest "Aggregate Price" of all items is negotiated. Offerors are cautioned to submit a price for all items. Failure to submit a price for all items may be reason to find the proposal non-responsive and subject to rejection.

2. For the purpose of evaluation, the aggregate price will be computed as follows:

(a) By multiplying the unit price for Item 1 by 9 (for 9 F-102A aircraft).

(b) By multiplying the unit price for Item 1a by 209 (for 209 F-102A aircraft).

(c) By multiplying the unit price for Item 2 by 3 (for 3 TF-102A aircraft).

(d) By multiplying the unit price for Item 2a by 35 (for 35 TF-102A aircraft).

(e) By multiplying the sum of all unit prices for Items 3 through 78 by 42. (Based on an anticipated accomplishment of an average total of 42 aircraft for purposes of evaluation of proposals only.)

(f) By multiplying the Contractor's hourly rate for Items 79 and 80 by an estimated 400 hours and in turn multiplying by a quantity of 256 aircraft.

(g) By adding the totals of (a) through (f) above and the price for data (Item No. 83a and b). This will be the offeror's total aggregate price.

3. Items 81 and 82 will not be included in this evaluation of proposals.

PART XVI - SUPPLEMENTAL INFORMATION:

1. The Contractor shall furnish with his proposal (but not as a part thereof) a plan of work showing his maintenance concept of the IRAN cycle. There will be no payment made for any cost incurred for the preparation and submission of this plan. It is recommended that the plan show the order in which IRAN is to be accomplished including the following: Examination and Inspection (E & I) of aircraft and engine; washing; the draining and purging of fuel tanks; dearming and making safe all accessories/equipment; circuit analysis of electrical wiring after inspection and repair thereof including circuitry outside of the MG10 "Black Boxes"; the repair of aircraft, of engine and/or components; corrosion control; pre flight and post flight inspection; touch up painting and other basic tasks required. It shall be noted that included in the basic IRAN is the accomplishment of the next numbered Periodic Inspection and many other tasks identified in Appendix "A".

2. Any Contractor who has previously submitted a plan of work to the Directorate of Procurement & Production, SAAMA within the last 60 days and said plan of work is identical to present requirements need not resubmit.

PART XVII - 3 YEAR POLICY CLAUSE:

1. Offerors are hereby notified that following award of any contract hereunder, subsequent procurement of services of the type herein described may

COST SUMMARY

Total aggregate price based on bid "A" charge for use Part I.

Item			
1.	Basic IRAN - Nic F-102A Aircraft	@ $ 25,427 =	$ 228,843
1a.	Basic IRAN - Two Hundred nine F-102A Aircraft	@ 10,817 =	2,260,753
2.	Basic IRAN - Three TF-102A Aircraft	@ 25,427 =	76,281
2a.	Basic IRAN - Thirty five TF-102A Aircraft	@ 10,817 =	378,595
3-78.	Forty two F/TF-102A Aircraft	@ 6,958 =	292,236
79 & 80.	400 Hrs. @ $5.49 = $2,196 x 256 Aircraft	=	562,176
83a.	Data Items Twelve Aircraft	=	4,304
83b.	Data Items Two Hundred Forty Four Aircraft	=	80,374
	Total Aggregate Price		$ 3,883,562

Total aggregate price based on bid "B" no charge for use Part I

Item			
1.	Basic IRAN - Nine F-102A Aircraft	@ $ 25,243 =	$ 227,187
1a.	Basic IRAN - Two Hundred Nine F-102A Aircraft	@ 10,738 =	2,244,242
2.	Basic IRAN - Three TF-102A Aircraft	@ 25,243 =	75,729
2a.	Basic IRAN - Thirty Five TF-102A	@ 10,738 =	375,830
3-78.	Forty Two T/TF-102A Aircraft	@ 6,956 =	292,152
79 & 80.	400 Hrs. @ $5.49 = $2,196 x 256 Aircraft	=	562,176
83a.	Data Items Twelve Aircraft		4,304
83b.	Data Items Two Hundred Forty Four Aircraft	=	80,374
	Total Aggregate Price		$ 3,861,994

be accomplished in accordance with the Three Year Policy of the Air Force Logistics Command, at the sole determination of the Government. Under said policy, an incumbent contractor may be retained for one additional one year period, provided:

(1) He has satisfactorily performed the services called for during the previous period.

(2) A valid requirement exists for the continuation of such services.

(3) Fair and reasonable prices can be negotiated for the third year period.

(4) The incumbent Contractor has the capability to perform such follow-on contracts. Awards of any follow-on contract will be entirely contingent on negotiation of a contract satisfactory to the Government. Offerors are cautioned that the Government does not hereby commit itself nor have any obligation to apply the Three Year Policy to any subsequent procurements of the same or similar services or to continue said policy for the full three year period.

2. Items 1 thru 2a shall be the requirement for the first year.

3. It is estimated that 276 F/TF102A aircraft will be input during FY67 and a quantity of 275 aircraft to be input in FY68.

PART XVIII - GOVERNMENT FACILITIES:

Contractors contemplating use of Government Facilities now on Facilities Contract to them shall nevertheless predicate their offers based on "Non-Use" or "Charge For Use" of such facilities and designated as "Bid A". Immediately following, offers may be made based on "No Charge" for use or "Rent Free" use of facilities. Non-conformance with this requirement may be cause for rejection of the proposal.

PART XIX - CRITICALITY OF AIRCRAFT AND END ITEMS:

The items to be inspected, repaired and/or modified as the result of this solicitation have a very critical application and affect the safety of flight. An award cannot be made hereunder until the Contracting Officer can determine that the offeror is technically qualified to perform the contract in accordance with the contractual requirements. In order to assist the Contracting Officer to make such determination, offerors shall submit with their offer evidence that will establish their capability. Evidence of satisfactory past performance in the repair, overhaul or modification of items identical or similar to those to be worked upon under this solicitation, both as to complexity and functional application, including specific identification as to time and place, will normally suffice to establish capability. It is requested that offerors who have not previously performed, for the Government, identical or substantially similar work, aid the Contracting Officer in making the above determination, by furnishing evidence that they have the following technical qualifications:

1. Experienced aircraft and system components repairmen capable of performing the repair, assembly and testing necessary to accomplish the work required.

2. Experienced quality control inspectors capable of performing all quality control functions called for by the work specifications and Technical Orders.

3. In their possession, or readily available and if not listed in Attachments 1 and 2, those special tools and test equipment cited in the applicable Technical Orders necessary to repair and test the items upon which work is to be performed. In addition, refer to Part XX below, entitled "Facilities and Equipment".

4. Contractors who have previously submitted the above information to the Directorate of Procurement and Production, SAAMA, within the last 60 days need not resubmit.

* Refer to pages 25, 26, and 27.

PART XX - FACILITIES AND EQUIPMENT:

1. The following facilities and/or equipment are the minimum required to perform under the contract:

a. Primary runway 150 x 8,000 feet with arresting barriers. (AFR 55-42)

b. Instrument Landing System (ILS) (Must be on site)
* See Supplemental Information regarding ILS.

c. Approved Tactical Air Navigation Approach (TACAN)

d. Ground Control Approach (GCA) is desired, but not required

e. Hard-surfaced taxiway and aprons

f. FAA-approved runway and taxiway lighting

g. Airfield maintenance equipment (if contractor is responsible for maintenance.

h. Fire-fighting and crash equipment

i. Control tower

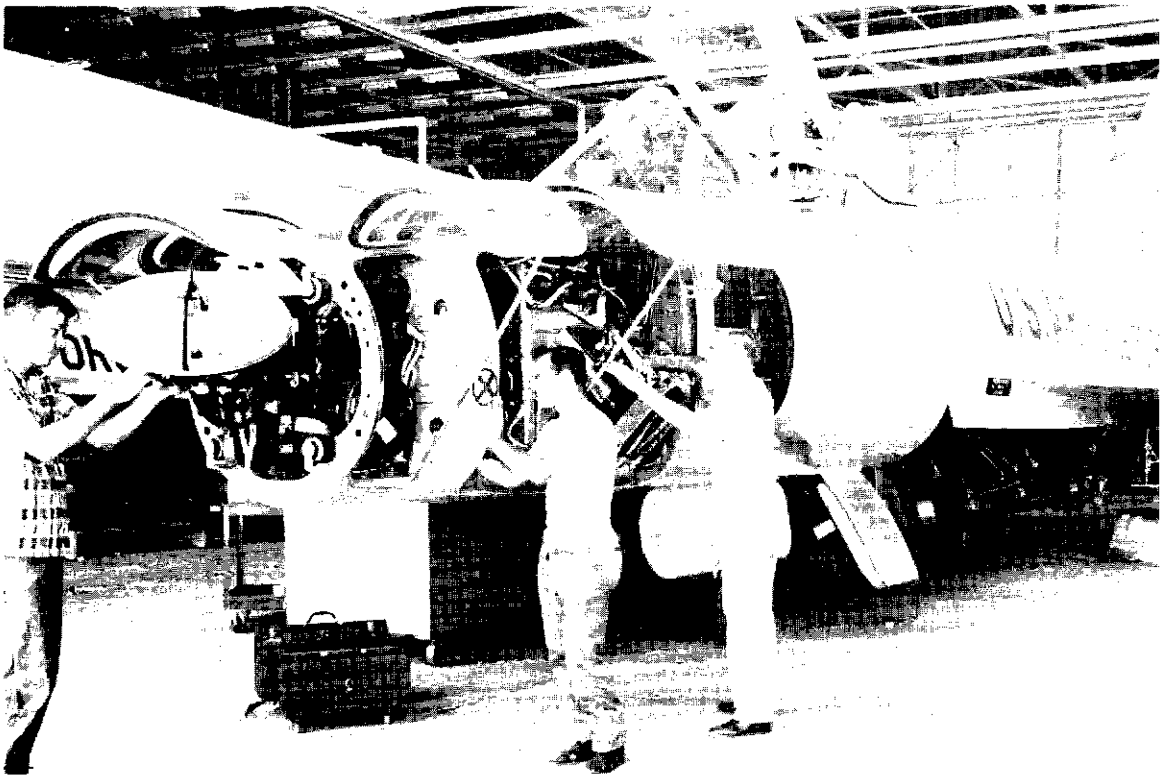
j. Security control and security clearances

CAPABILITY AND EXPERIENCE

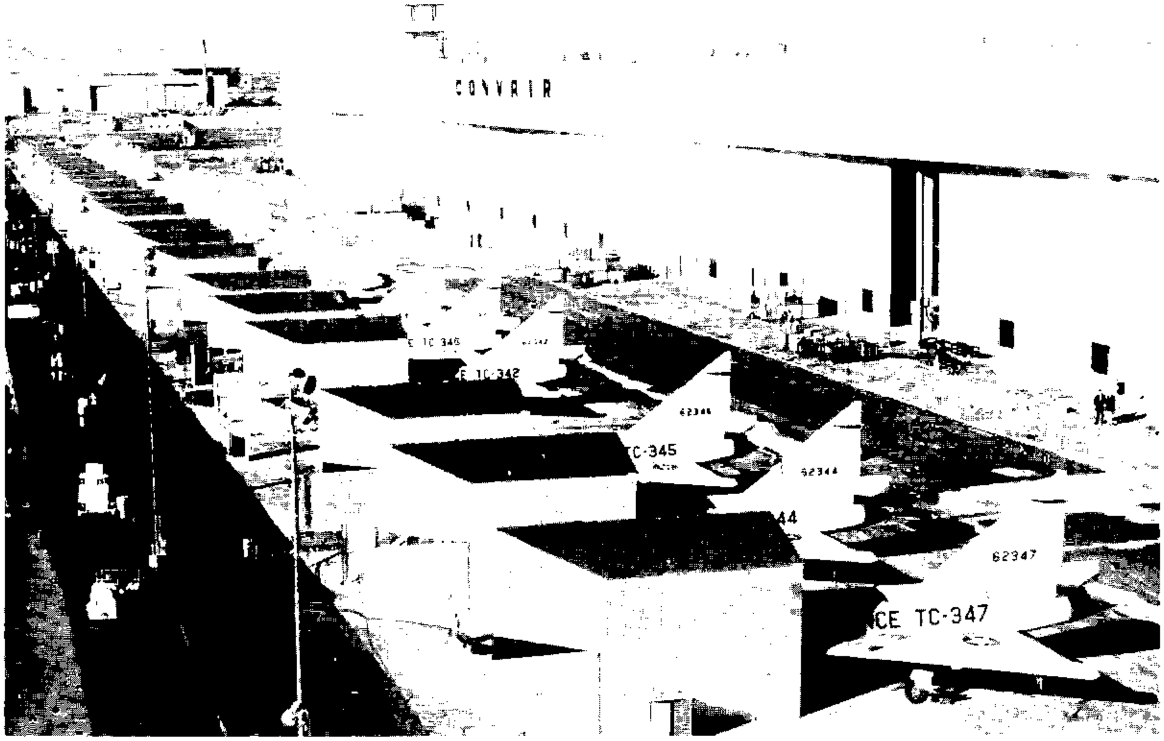
CONVAIR MODIFICATION PROGRAM MANAGEMENT

F/TF-102A MODERNIZATION PROGRAM — Under Air Force Contracts AF 41(608)-8888 and AF 41(608)-9299, Convair undertook the modernization, repair and flight test of 229 F/TF-102A aircraft. During this rework test, the MG-10 fire control system wiring was checked for compatibility and continuity, system components were processed through functional and operational maintenance and modification as necessary, and aircraft systems and structure were updated and repaired.

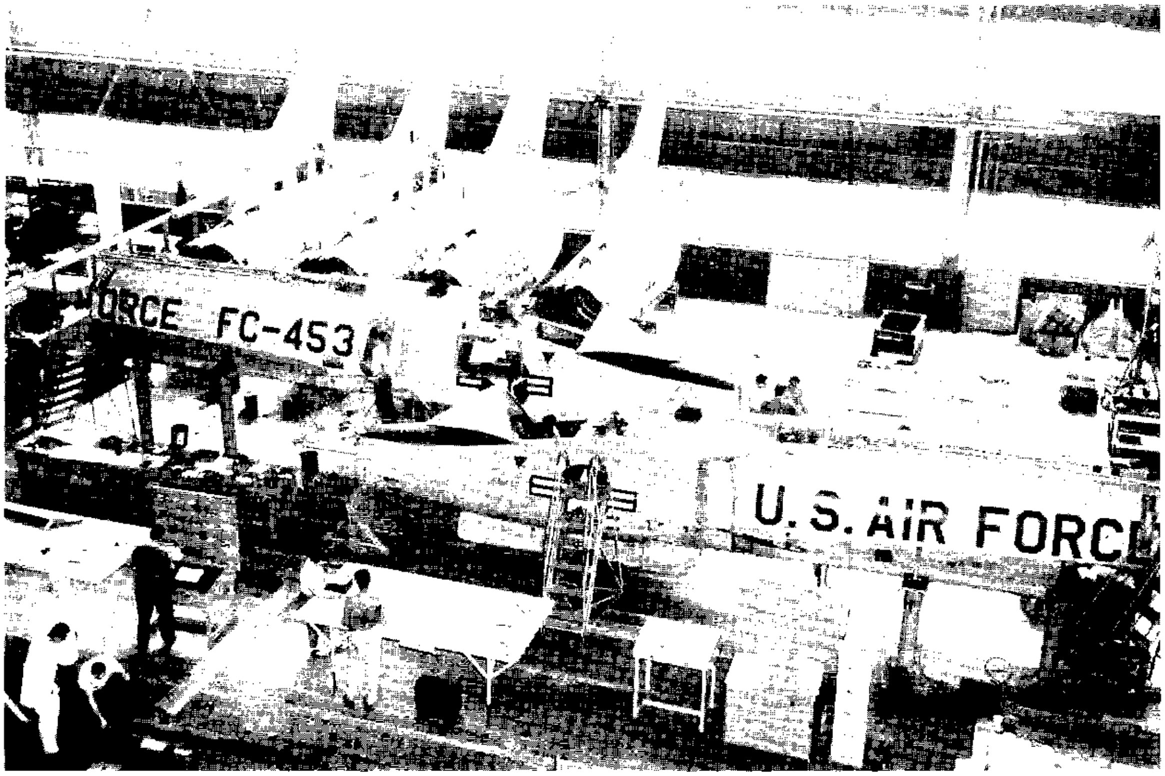
This $10.9 million program was completed on schedule and below cost.



F-102A Fire Control System Modification



Delivery and Modification Facility, Palmdale, California



F-106 Test-to-Tactical Modification

PALMDALE OPERATION — A major example of Convair's ability to manage this type of program was demonstrated during the F-102 and F-106 modification operation at Palmdale, California. At this major facility, a peak of 43 F-102A deliveries per month was achieved with a total of 76 F-102A aircraft per month in the work process. At the peak of facility operation, some 2,000 personnel were employed under the direction of Convair managers.

F-106 TEST-TO-TACTICAL MODIFICATION — Upon completion of the F-106 production program, 35 F-106A and F-106B aircraft were recycled for modification from various test configurations to a tactical configuration. This task consisted of extensive aircraft modifications, including changes to the structure, landing gear and electrical/electronic wiring. This program, conducted under USAF Contract AF 41(608)-11333, covered delivery of the 35 aircraft to the Air Force over a period of six months. The $19.6 million task was completed within schedule and under cost.

k. Operating maintenance support shops

l. Painting and washing facilities

m. 100,000 sq ft covered work space x 23 ft unobstructed height

n. Adequate storage facilities to protect parts, fuel, aircraft equipment and other government property from weather, pilferage, and security compromise.

o. Electrical, heating, water, sanitary and communication systems

p. Jet engine test stand with J-57 capacity

q. Aircraft fueling and defueling facilities

2. Attachments 1 and 2 are listings of Aero Space Ground Equipment (AGE) and Jet Engine Field Maintenance Equipment (JEFM). Air Force personnel believe that the items listed may be required for performing those tasks set forth in Appendix "A". The Government proposes to furnish those items listed on a required phased basis if required by the firm being awarded this IRAN procurement. The Contractor shall be responsible for maintenance and administration, repair and protection of listed items furnished in accordance with the General Provision clause entitled "Government Furnished Property". Contractors are requested to indicate on Attachments 1 and 2 those items which are required by them to perform. This may be accomplished by striking out those items not required. *Review of RFP Attachments 1 and 2 reveals the equipment is not available and is expected to be government-furnished. The review also indicated changes in quantity from that recommended. These changes have been annotated on the portion of Attachments 1 and 2 attached to this proposal. Only those pages where quantities are changed have been attached.

PART XXI - AVAILABILITY OF FUNDS:

The following clause is applicable to FY 1966 requirements identified as Item 1a, 209 each F-102A aircraft; Item 2a, 35 each TF-102A aircraft and Item 83b Data. Additionally those portions of Items 3 through 82 which are determined to be in support of Items 1a and 2a shall fall under the purview of this clause.

> AVAILABILITY OF FUNDS. Funds are not presently available for this procurement. The Government's obligation hereunder is contingent upon the availability of appropriated funds from which payment for the contract purposes can be made. No legal liability on the part of the Government for payment of any money shall arise unless and until funds are made available to the Contracting Officer for this procurement and notice of such availability, to be confirmed in writing by the Contracting Officer, is given to the Contractor. (SEP. 1962)

PART XXII - SPECIFICATIONS:

One (1) complete set of all applicable appendices referenced in Part I of the Schedule of this Request for Proposals is attached to each set of this Request for Proposals. Technical Orders, Regulations and Military Specifications referred to in the attached appendices and applicable to this procurement are on file at the San Antonio Air Material Area, Kelly Air Force Base, Texas and may be viewed Monday through Friday from 0900 to 1500 hours. The aforesaid publications may also be available for inspection at the Air Materiel Area nearest your plant. Locations of AMA's are as follows:

Middletown Air Materiel Area
Olmstead Air Force Base, Pennsylvania

Mobile Air Materiel Area
Brookley Air Force Base, Alabama

Ogden Air Materiel Area
Hill Air Force Base, Utah

Oklahoma City Air Materiel Area
Tinker Air Force Base
Oklahoma City, Oklahoma

Sacramento Air Materiel Area
McClellan Air Force Base, California

Rome Air Materiel Area
Griffiss Air Force Base
Rome, New York

San Antonio Air Materiel Area
Kelly Air Force Base, Texas

Warner Robins Air Materiel Area
Robins Air Force Base, Georgia

San Bernardino Air Materiel Area
Norton Air Force Base, California

PART XXIII - PREPRODUCTION AND STARTUP AND OTHER NONRECURRING COSTS:

Any offeror contemplating that preproduction and start-up and other non-recurring costs may be absorbed or recovered in connection with subsequent pricing actions or future contracts will provide the following information:

1. The estimate of the total of such costs
2. The extent to which these costs are included in the proposed price
3. The intent to absorb or plan for recovery of any remaining cost.

PART XXIV - DATA PRICING: (JAN 1963)

Except for data customarily furnished by the Contractor to commercial customers with equipment, offerors shall not submit proposals on data items with the words "No Charge for Data" or "Data Price Included in Costs of End Items."

(NOTE: Offerors shall individually price each item of data specified on the DD Form 142 attached. Enter the manhours required for preparation and the price for each data item in the columns titled "M/H Req for Single Prep" and "Prep Cost for Single Prep", respectively. Any reference to "estimated cost/prices" appearing in specific data items identified in the "Authority" block on the DD 1423 shall be understood to mean "firm fi price(s)" which can be accepted by the Government without further negotiation.)

PART XXV - INTERCHANGEABILITY OF TERMS (JUL 1964)

Whenever used in this contract the term "Subject Data" is one and the same as "Technical Data".

PART XXVI - LIMITATION ON TECHNICAL DATA REQUIREMENTS: (JUL 1964)

All the technical data and reports requirements of this contract are set forth in the contractor data requirements list (DD Form 1423) attached thereto and made a part hereof and in the ASPR and AFPI clauses included herein. In case of difference or conflict between the data requirements list and the ASPR and AFPI clause, the latter shall gover Nothing in any other documents or specifications made a part hereof shall be construed as altering such data and reports requirements in any way.

PART XXVII - DATA CONTROL:

All Technical Type Data requirements are set forth in detail on AFSC/AFLC Form 9s contained in Volume II of AFLCM/AFSCM 310-1 or on the AFSC/AFLC Form 9s attached hereto. Copies of referenced manual have been distributed to contractors and AFPRO/CMDs throughout the United States. Contractors should contact the nearest AFPRO/CMD in the event they do not have a copy of referenced manuals. Offerors are requested to perform a thorough review and analysis of data requirements set forth herein and to recommend, where appropriate, such changes, alternate data proposals, etc., as may be considered t be in the best interest of the Government. It is understood that by signing the cover sheet of this Request for proposal, the offeror certifies that the has not previously furnished to the Government any of the data set forth on attached DD 1423. In the even that the offeror has furnished to the Government any of the exact same data, he shall proceed to quote on such data items and thereafter identify the data previously furnish

PART XXVIII - MARKING OF TECHNICAL DATA (JUL 1964)

The Contractor agrees to mark the number of this contract, and the name and address of the Contractor or subcontractor who generated the data, on technical data delivered to the Government pursuant to any requirement of this contract.

PART XXIX - RIGHTS IN DATA: (JUL 1964)

Except as provided in clause entitled "Value Engineering Incentive", the rights obtaine by the Government in Technical Data are set forth in the Data Clause incorporated in th contract, and nothing elsewhere in this contract or in any documents incorporated by reference in this contract shall be construed as in any way altering such rights.

NOTE: The reference to ASPR 9-203.1 in General Provision Nr. 34 entitled "Data Withholding of Payment" is changed to read ASPR 9-203(b).

PART XXX -

The following listed clauses are applicable to those items of the schedule wherein cost reimbursement to the Contractor is contemplated:

SAPM 71-39 dated 7 Oct 64
SAPM 71-67 dated 7 Oct 64
SAPM 71-71 dated 7 Oct 64
SAPM 71-72 dated 7 Oct 64 - Applicable to Material Reimburseable portion of contract only

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PART I CONTRACTOR'S STATEMENT OF CONTINGENT OR OTHER FEES FOR SOLICITING OR SECURING CONTRACTS:

If the bidder, by checking the appropriate box provided therefor in his bid has represented that he has employed or retained a company or person (other than a full-time bona fide employee working solely for the bidder-contractor) to solicit or secure this contract, or that he has paid or agreed to pay any fee, commission, percentage, or brokerage fee to any company or person contingent upon or resulting from the award of this contract, he may be requested by the contracting officer to furnish a complete Standard Form 119, "Contractor's Statement of Contingent or Other Fees" (December 1952 Ed.). If an offeror has previously furnished a completed Standard Form 119 (December 1952 Ed.) to the office issuing this Solicitation and Offer he may accompany his bid with a signed statement, (a) indicating when such completed form was previously furnished, (b) identifying by number the previous Solicitation and Offers or contract, if any, in connection with which such form was submitted; and (c) representing that the statement in such form is applicable to this bid

PART II NOTICE TO OFFEROR(S):

Offeror(s) submitting bids are cautioned to carefully examine all phases of this Solicitation and Offer including the Instructions and Conditions on the reverse side of DD Form 1490 (Cover Page hereof). This Solicitation and Offer is not a commitment that an award will be made. It is contemplated, however, that evaluation of the proposals received as a result of this solicitation will result in the selection of a source for negotiation of a contract. However, Offeror(s) are herewith advised that an award of a contract may be made without discussion or negotiations of proposals received and therefore, Offeror(s) should initially submit their proposals on the most favorable terms, from a price and technical standpoint. There will be no payment by the Government for any costs incurred for the preparation and submission of any proposal in response to this solicitation. Unnecessarily elaborate brochures and other presentations beyond that sufficient to present a complete and effective proposal are not desired.

PART III D.O. RATING:

The contract resulting from this solicitation will be assigned a DO Rating by the procurement agency. Allotments of controlled materials must be obtained by application to the appropriate claimant agency as set forth in DMS Regulation No. 1.

PART IV FINANCIAL ASSISTANCE:

Financial assistance in the form of Advance Payments and/or Progress Payments will be made in conformity with existing regulations. The need for Advance Payments and/or Progress Payments will not be considered a handicap or adverse factor in the award of a contract hereunder. Offerors desiring such financial assistance must include a written request therefor in their proposals.

PART V - FINANCIAL AND TECHNICAL ABILITY:

(a) The following is applicable if the amount of a contract contemplated by this solicitation is $10,000 or more:

If a bid or proposal submitted in response to this solicitation is favorably considered a survey team may contact your facility to determine your ability to perform. Current financial statements and other pertinent data should be available at that time if not already on file with the Air Force Systems Command. The team may also evaluate your system for determining the financial and technical ability of your proposed subcontract or procurement sources to perform. Examples of the type of matters the survey team may examine and evaluate are:

1. Past experience with firm (if any).
2. Financial condition.
3. Accounting system.
4. Facilities.
5. Plant loading.
6. Production control system
7. Materiel control system.
8. Ability to meet required delivery schedule.
9. Receiving and inspection systems.
10. Purchasing and subcontracting systems
11. Quality control system
12. Apparent understanding of specifition requirements.
13. Realism of lead time estimates.
14. Scrap and rework control procedures.
15. Packing and shipping procedures.
16. Facilities and procedures for storing and handling Government-furnished property.
17. General housekeeping
18. Manpower availability and labor relations.
19. Engineering capability.
20. Management controls.
21. Any other areas pertinent to possible performance of the prospective contract.

(b) The following is applicable if the amount of a contract contemplated by this Solicitation and Offer is less than $10,000.

If a bid or proposal submitted in response to this solicitation is favorably considered, a survey team may contact your facility to determine your ability to perform. Current financial statements and other pertinent data should be available at that time if not already on file with the Air Force Systems Command. The team may also evaluate your system for determining the financial and technical ability of your proposed subcontract or procurement sources to perform.

PART VI - REVIEW OF AIRCRAFT AND T.O.'s:

All pertinent technical orders and other directives applicable to this IRAN are available for review at this office. Aircraft currently in work may be inspected at Hq, Mobile Air Materiel Area, Brookley AF Base, Alabama. Complete aircraft may be inspected at this Hq.

PART VII - ROYALTY INFORMATION:

(a) If no royalty payments are involved check this space /X/.

(b) If royalty payments are involved, check this space /___/ and indicate amount $__________.

(c) If royalty payments are involved as indicated in (b) above and such are in an amount of more than $250.00, the following information must be furnished on each separate item of royalty or license fee:

(i) Name and address of Licensor ____________________

(ii) Date of License Agreement ____________________

(iii) Patent numbers, patent application serial numbers or other basis on which the royalty is payable ____________________

(iv) Brief description, including any part or model numbers of each contract item or component on which the royalty is payable ____________________

(v) Percentage or dollar rate of royalty per unit ____________________

(vi) Unit price of contract item ____________________

(vii) Number of units;____________________; and

(viii) Total dollar amount of royalties ____________________

(d) DD Form 783, Royalty Report, is approved for use in furnishing the above information. In addition, if specifically requested by the Contracting Officer prior to execution of the contract, a copy of the current license agreement and identification of applicable claims of specific patents shall be furnished.

PART VIII - PLACE(S) OF PERFORMANCE:

Contractor will enter all locations of plants where items will be produced including street address, and the names and addresses of owner and operator of producing facilities, if other than offeror.

CITY San Diego STREET ADDRESS 3302 Pacific Highway

COUNTY San Diego STATE California

If more than one location is shown, indicate which location involves the largest dollar amount. If additional space is needed, offeror may attach an additional sheet.

PART IX - NEW MATERIAL (NOV 1963)

Except as to any supplies and components which the Specification or Schedule specifically provides need not be new, the Contractor represents that the supplies and components including any former Government property identified in the "Government Surplus" clause of this contract to be provided under this contract are new (not used or reconditioned, and not of such age or so deteriorated as to impair their usefulness or safety). If at any time during the performance of this contract the Contractor believes that the furnishing of supplies or components which are not new is necessary or desirable, he shall notify the Contracting Officer immediately, in writing, including the reasons therefor and proposing any consideration which will flow to the Government if authorization to use such supplies is granted.

PART X - GOVERNMENT SURPLUS (NOV 1963)

(a) In the event that bid or proposal is based on furnishing items or components which are former Government surplus property or residual inventory resulting from terminated Government contracts, a complete description of the items or components, quantity to be used, name of Government agency from which acquired, and date of acquisition shall be set forth below:

None

Notwithstanding any information provided in accordance with this provision, items furnished by the Contractor must comply in all respects with the specifications contained herein.

(b) Except as disclosed by the contractor in (a) above, no property of the type described herein shall be furnished under this contract unless approved in writing by the contracting officer.

PART XI - PERCENTAGE OF SUBCONTRACTING:

The "percentage of subcontracting" in Item 11g on DD Form 1490 will be reported as a percentage of the prime contractor's selling price. "Subcontracting" means only contracts for the production of or work upon an item, component, or assembly and does not include: (i) any purchase of a standard commercial or catalog item, (ii) any purchase of a basic raw material, (iii) any purchase of supplies, or services for general operation of the contractor's plant, or (iv) any purchase from a parent, subsidiary, or affiliate of the contractor.

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PART XII - DEFINITION OF SMALL BUSINESS:

A small business concern for the purpose of Government procurement is a concern, including its affiliates, which is independently owned and operated, is not dominant in the field of operation in which it is bidding on Government contracts and can further qualify under the criteria concerning number of employees average annual receipts, or other criteria, as prescribed by the Small Business Administration. (See Code of Federal Regulations, Title 13, Part 121, as amended which contains detailed industry definitions and related procedures.)

PART XIII - FEDERAL, STATE AND LOCAL TAXES (Applicable if contract award if in excess of $10,000.00)

General Provision Nr 22 shall apply if the offeror indicates below that the price(s) quoted exclude(s) contingencies for federal, state and local taxes. If the Contracting Officer determines that such contingencies are included, General Provision clause entitled Federal, State and Local Taxes included in MCP 71-76 attached shall apply and such determination by the Contracting Officer will be indicated on the Acceptance sheet of resulting contract. Offeror will enter an "X" in one of the following blocks:

/ X / Contingencies for federal, state and/or local taxes are included in pricing.

If offeror has indicated that a contingency or contingencies, are included in the price(s) for the items being procured, he must indicate below the nature of each contingency and the amount included for that contingency in each unit price affected.

A total of $30,853 has been included in the overhead rate for local property taxes on fixed assets. Since these property taxes are included in overhead they have been automatically allocated to each unit price.

/ / Contingencies for federal, state and/or local taxes are not included in pricing.

PART XIV - COMMERCIAL SUPPLIES:

(Applicable if contract award is in excess of $5,000.00.)

(a) Bidder or offeror shall indicate below whether all or part of the supplies being offered, or with relatively minor modification, are, or have been sold or offered for sale by him to the public in the commercial open market:

☐ Yes ☒ No

(b) In the event the foregoing certification is applicable only to certain of the items being offered, the contractor shall indicate hereunder the specified items which have not been offered for sale to the public in the commercial open market.

____

____

(c) If the answer to the above certificate is "yes", the Patent Indemnity Clause, AFPI 71-597, attached hereto, shall be applicable to any resulting contract. If the answer is "no", the Patent Indemnity Clause shall be inapplicable to any resulting contract.

(d) Failure of the bidder or offeror to indicate the status of the supplies as contemplated by the foregoing, shall be construed as a representation that said supplies are, or have been sold or offered for sale to the public in the commercial open market and AFPI 71-597 shall apply to any resulting contract.

PART XV - CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (JUN 1964)

Item 11f on DD Form 1490 and Paragraph 12 of the Instructions and Conditions on the reverse of the Cover Page are hereby deleted and the following substituted in lieu thereof:

(a) By submission of this bid or proposal, each bidder or offeror certifies, and in the case of a joint bid or proposal, each party thereto certifies as to its own organization, that in connection with this procurement:

(1) The prices in this bid or proposal have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or offeror or with any competitor;

(2) unless otherwise required by law, the prices which have been quoted in this bid or proposal have not been knowingly disclosed by the bidder or offeror and will not knowingly be disclosed by the bidder or offeror prior to opening, in the case of a bid, or prior to award, in the case of a proposal, directly or indirectly to any other bidder or offeror or to any competitor; and

(3) no attempt has been made or will be made by the bidder or offeror to induce any other person or firm to submit or not to submit a bid or proposal for the purpose of restricting competition.

(b) Each person signing this bid or proposal certifies that:

(1) he is the person in the bidder's or offeror's organization responsible within that organization for the decision as to the prices being bid or offered herein and that he has not participated, and will not participate, in any action contrary to (a)(1) through (a)(3) above; or

(2) (a) he is not the person in the bidder's or offeror's organization responsible within that organization for the decision as to the prices being bid or offered herein but that he has been authorized in writing to act as agent for the persons responsible for such decision in certifying that such persons have not participated, and will not participate, in any action contrary to (a) (1) through (a)(3) above, and as their agent does hereby so certify; and (b) he has not participated, and will not participate, in any action contrary to (a)(1) through (a) (3) above.

(c) This certification is not applicable to a foreign bidder or offeror submitting a bid or proposal for a contract which requires performance or delivery outside the United States, its possessions, and Puerto Rico.

(d) A bid or proposal will not be considered for award where (a)(1), (a)(3), or (b) above has been deleted or modified. Where (a)(2) above has been deleted or modified, the bid or proposal will not be considered for award unless the bidder or offeror furnishes with the bid or proposal a signed statement which sets forth in detail the circumstances of the disclosure and the Secretary, or his designee, determines that such disclosure was not made for the purpose of restricting competition.

PART XVI - LOS ANGELES CITY LICENSE TAXES (In the event General Provision Nr 22 applies to the contract resulting herefrom, the provision set forth in Paragraph (a) below shall also apply. However, in the event General Provision entitled "Federal, State & Local Taxes" included in MCP 71-76 applies to the contract resulting herefrom, the provision set forth in Paragraph (b) below shall also apply.

Notwithstanding any other provisions of this contract:

(a) (i) The contract price includes allocable Los Angeles City License taxes, including those taxes (hereinafter referred to as "additional taxes") resulting from the application of principles expressed by the Los Angeles City Attorney in his opinion dated 2 March 1960. If, after the contract date, the contractor is not required to pay or bear the burden, or obtains a credit or refund of all or a portion of said taxes from the City of Los Angeles, the contract price shall be decreased by the amount of such relief or refund allocable to this contract, or that amount shall be paid to the Government, as the Contracting Officer directs. The contract price shall be similarly decreased if the Contractor, through his fault or negligence or failure to follow instructions of the Contracting Officer as provided in (b) below, is required to pay or bear the burden or does not obtain a refund of any such taxes. Interest paid or credited to the Contractor incident to a refund of these taxes shall inure to the benefit of the Government to the extent that such interest was earned after the Contractor was paid or reimbursed by the Government for these taxes.

(ii) The Contractor shall comply with the instructions of the Contracting Offic in order to obtain a reduction, credit or refund of Los Angeles City License Taxes, and the contract price shall be equitably adjusted to cover the costs of such compliance, including reasonable attorneys' fees arising therefrom.

(iii) The Contractor shall maintain accurate records showing the amount of Los Angeles License Taxes, and specifically the amount of additional taxes, included in the contract price.

(b) (i) The contract price includes allocable Los Angeles City License Taxes, incl ing those taxes (hereinafter referred to as "additional taxes") resulting from the application of principles expressed by the Los Angeles City Attorney in his opinion dated 2 March 1960. If, after the contract date, the Contractor is not required to pay or bear the burden, or obtains a credit or refund of all or a portion of said ta from the City of Los Angeles, the contract price shall be adjusted in accordance wit the clause hereof entitled "Federal, State, and Local Taxes." As provided in said clause, the contract price shall also be adjusted if the Contractor, through his fau or negligence or failure to follow the instructions of the Contracting Officer, is required to pay or bear the burden or does not obtain a refund of such taxes.

(ii) The Contractor shall maintain accurate records showing the amount of Los Angeles License Taxes, and specifically the amount of additonal taxes, included in the contract price.

PART XVII - BUY AMERICAN ACT:

(a) Specific information as to articles, materials, and supplies excepted from the Buy American Act is available to prospective contractors upon request.

(b) Acquisition of foreign end products by prospective contractors for subsequent delivery to the Government is permissible to the extent that the products are one or more of those described as excepted from the Buy American Act by the Procuring Contracting Officer. For the purposes of this part, foreign end product means an end product other than a domestic source end product as defined in the contract clause entitled "Buy American Act," except that the restrictions of the "Buy American Act" shall not apply to articles, materials, or supplies that are mined, produced, or manufactured in Panama and are purchased for use in the Canal Zone.

(c) Bids or proposals shall be evaluated so as to give preference to domestic bids or proposals and bids or proposals offering Panamanian end products which are purchased for use in the Canal Zone. Bids offering Canadian end products on the lists described in ASPR 6-103.5(a) shall be evaluated on a parity with domestic bids, i.e. neither a price differential nor duty shall be added, and bids offering Canadian end products of the type described in ASPR 6-103.5(b) shall be evaluated on a parity with domestic bids (whether or not a duty-free entry certificate may be issued) except that any applicable duty shall be added. Each foreign bid (other than a low bid offering a Canadian end product) shall be adjusted for purposes of evaluation either by excluding any duty from the foreign bid and adding 50 percent of the bid (exclusive of duty) to the remainder, or by adding to the foreign bid (inclusive of duty) a factor of 6 percent of that bid, whichever results in the greater evaluated price, except that a 12 percent factor shall be used instead of the 6 percent factor if (i) the firm submitting the low acceptable domestic bid is a small business concern, or a labor surplus area concern, or both, (ii) small purchase procedures are not used, and (iii) any contract award to a domestic concern which would result from applying the 12 percent factor, but which would not result from applying the 6 percent or 50 percent factor, would not exceed $100,000. (If an award for more than $100,000 would be made to a domestic concern if the 12 percent factor is applied, but would not be made if the 6 percent or 50 percent factor is applied, the matter shall be submitted to the Secretary of the Department concerned for a decision as to whether the award to the small business or labor surplus area concern would involve unreasonable cost or inconsistency with the public interest.

(Domestic bid means a bid or offered price for a domestic source end product, including transportation to destination. Foreign bid means a bid or offered price for a foreign end product, including transportation to destination and duty (whether or not a duty-free entry certificate may be issued)).

PART XVII - BUY AMERICAN ACT (CONT'D)

When more than one line item is offered in response to a solicitation the appropriate factor shall be applied on an item-by-item basis except that the factor may be applied to any group of items as to which the Solicitation and Offer specifically provides that award may be made on a particular group of items.

(d) Bidder or offeror shall complete the entry entitled "Excluded Items," which is contained in the certificate set out hereunder. If such entry is not made, same shall be presumed to be "None". It is understood that the bidder's or offeror's signature on the cover sheet of this solicitation shall suffice as certification of the following certificate:

BUY AMERICAN CERTIFICATE

The der or offeror hereby certifies that each end product, except the end products excluded below is a domestic source end product (as defined in the contract clause entitled "Buy American Act"); and that components of unknown origin have been considered to have been mined, produced, or manufactured outside the United States.

EXCLUDED ITEMS: None

(For the purpose of this certificate, the United States is defined as the states, the District of Columbia, Puerto Rico, American Samoa, the Canal Zone, the Virgin Islands, Guam, and any other areas subject to the complete sovereignty of the United States).

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PART XVIII - GOVERNMENT PROPERTY:

(a) Offerors may use in performing the work bid upon, any item of Government property in the offeror's possession under a facilities contract(s) or other agreement independent of this Solicitation and Offer, provided such facilities contract(s) or other agreement authorizes such use. Offerors contemplating the use of Government property in their possession in performance of the work being bid upon must submit dual bids, i. e., a bid based on the use of Government property on a charge-for-use basis and a bid based on the use of Government property on a no-charge for use basis, unless the Government property in offeror's possession is on a charge-for-use basis, in which event, offeror need only submit an offer based on non-use or charge for use of Government property. In the event, the facilities contract(s) or other such agreement authorizes the use of Government property on a no-charge-for use basis, the offeror must negotiate an appropriate rental fee with the Government agency administering said facilities contract(s) or other such agreement prior to submitting his offer in order that the appropriate rental fee be included in the bid which is predicated on use of Government property on a charge-for-use basis. If award of the contract resulting from this Solicitation and Offer, is made to an offeror who contemplates the use of Government property in his possession, the Government shall authorize such use, as appropriate, by inserting the prescribed clause in the resultant contract at time of award.

(b) Offeror wi [illegible] ieck one (1) of the following:

"This offer is / X /, is not /___/, predicated on use, in performance of any contract resulting herefrom, of Government property presently in the offeror's possession under a facilities contract or other agreement independent of this Solicitation and Offer."

(NOTE: If the offer is not predicated on the use of Government Property, the offeror may disregard the remainder of this clause).

(c) If the offeror has indicated above that his offer is predicated on use of Government property which is presently in his possession, he shall furnish the information requested herein by completing the following statements in the spaces provided therefor.

"This offer is predicated on use of Government property which is presently available to offeror under Supply Contract(s) No.(s) AF 33(600)36546 ________________________ on a charge /___/, no charge / X /, basis, in accordance with all other terms and conditions as set forth in said facilities contract(s). The offeror hereby certifies that his use of said property in performing the work being bid upon will not interfere with the primary purpose for which the property as furnished the offeror, and further, that such use will not extend beyond the anticipated date of completion of the primary purpose. The property pecified in the facilities contract(s) set out above is /____/, is not / X /, o be used by subcontractors.

PART XVIII - GOVERNMENT PROPERTY (Cont'd)

NOTE: If Government property specified in the facilities contract(s) set out above is to be used by subcontractors or if subcontractors are to use Government property in their possession under other facilities contracts (identify such other facilities contracts), the offeror shall furnish the following additional information with respect thereto: (additional sheets may be used if required).

Identity of Subcontractor: ____________________

Subcontractor's Facility Contract Nr.(s) ____________________

Subcontracted items involved: ____________________

Charge-for-use-basis ☐ ____________________

No-charge-for-use-basis ☐ ____________________

(d) In the event offeror desires to use any Government property in his possession, and has so indicated above, he shall be prepared to furnish upon request by the Contracting Officer, any additional information and/or evidence as may be required to verify or complete the certificate and other entries set out above. It is understood that offeror's signature on the cover sheet of this Solicitation and Offer shall suffice as certification of the entries and statements contained herein.

(e) Offerors are herewith advised that bids will be evaluated on the basis of the fixed price submitted which is based on "non-use" or Charge-for-use" of Government property in offeror's possession. Offerors who contemplate the use of Government property in their possession, and who have so indicated in this Solicitation and Offer may be considered nonresponsive should they fail to submit dual bids as contemplated herein. If, however, based on the rent-inclusive price (Charge-for-use), an offeror contemplating use of Government property, who has such property in his possession on a no-charge-for-use basis, is to receive the award, the price to be used in making the award will be the rent-exclusive price (no-charge-for-use). In addition proposals will be evaluated on the basis of the lowest cost to the Government taking account of transportation costs to the Government, from point of origin to the designated destination.

ESTIMATED DATA COSTS

In accordance with Item 83 of the RFP and Para. 3b(2) of Volume I, AFLCM 310-1, Convair is quoting a firm fixed price for data against Item 83 of the RFP schedule. The Item 83 price and the DD-1423 Form estimated costs include the following pricing elements:

Pricing Element	Item 83 Firm Fixed Price	DD-1423 Form Estimated Cost
Direct manhours	X	X
Direct materials	X	X
Indirect manhours		X
Indirect materials		X
Single preparation		X
Multiple preparation	X	X

For the reasons shown in the above tabulation, it is not possible to correlate the cost of Item 83 with the sum of the individual items on DD Forms 1423. Further, Convair understands that the estimated costs shown on DD Forms 1423 will be removed from these forms when they become a contract exhibit in accordance with 3b(1) of Volume I of AFLCM 310-1. The Item 83 firm fixed price is subject to negotiation depending on final selection of contract data items.

PR SA-5-02004 & -1 & SA-6-60000

CONTRACTOR DATA REQUIREMENTS LIST	SYSTEM	RFP NO SA-5-97167	CONTRACT NO	REPORT CONTROL SYMBOL

LINE ITEM NO. a	TITLE b	CONTRACTOR COVERAGE c	AUTHORITY d	FORM NO. e	PUBLIC REPORT APPROVAL NUMBER f	REQUIRING OFFICE g	FREQUENCY AND NUMBER OF COPIES h	AS OF DATE i	DUE DATE j	EST M/H REQ FOR SINGLE PREP k	EST PREP COST FOR SINGLE PREP l
83.1	Maint Descrepancy/Production Credit Record		M-48-63.0	AFTO 210	21-R227.1	AFSME	A/B	N/A	N/A	1	5
83.2	Maint Discrepancy/Production Credit Record		M-49-63.0	AFTO 211	21-R227.1	AFSME	A/R	N/A	N/A	1	5
83.3	Time Compliance Technical Order Work Record		M-50-63.0	AFTO 212	21-R227.1	AFSME	A/R	N/A	N/A	1	5
83.4	Unsatisfactory Report "U		S-46-42.0	AFTO 29 & 29A/DD787-1	21-R108.2	AFLC	A/R	N/A	N/A	2	10
83.5	Aircraft/Missile Maint Production compression report "U"		L-20-63.0	N/A	21-R232	SAAMA SA AFLC	NCEA Weekly	Thurs. 1500Z	Thurs. 1900Z	4	19
83.6	Overhaul Contractor Stock Balance Report		L-5-63.0	AFLC 11	21-R057.5	SSM/TM SB & CR	Quarterly	30 June & 30 Sep 31 Dec & 31 Mar	15 July Oct Jan & Apr.	20	95
83.7	Materiel Requirement List		L-19-63.0	AFLC 14	21-R200	AFLC	1 during life of cont.	6 mo after award	30 days after " as of"	40	190
83.8	Engine Status		L-1-63.0	AF 1534	21-R120.2	OCAMA (OCCSP)	A/R	N/A	N/A	2	10

PREPARED BY (Name, title and office symbol)	DATE PREPARED	APPROVED BY (Name, title and office symbol)	DATE APPROVED
Mary Hotchkiss, NPRP	21 Sep 64	Hazel E. Akeroyd, DMO, NPRP	21 Sep 64

DD FORM 1 MAR 63 1423

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Supplemental to PR SA-5-02004 & -1 & SA-6-60000

CONTRACTOR DATA REQUIREMENTS LIST		SYSTEM		RFP NO SA-5-97167		CONTRACT NO			REPORT CONTROL SYMBOL	
LINE ITEM NO. a	TITLE b	CONTRACTOR COVERAGE c	AUTHORITY d	FORM NO. e	PUBLIC REPORT APPROVAL NUMBER f	REQUIRING OFFICE g	FREQUENCY AND NUMBER OF COPIES h	AS OF DATE i	DUE DATE j	EST M/H REQ FOR SINGLE PREP k
83.9	Mat Insp & Receiving Report	See U-1	RFP CLAUSE 44 SAPM 71-81	DD250	ASPR 7-105.7		A/R	With ea	aircraft	2
83.10	Certificate of Conformance	See U-2	RFP Clause SAPM	71-81			5	With each	DD250	1
83.11	Value Eng Cost Red. Proposals	See U-3	Clause SAPM	71-76			A/R	N/A	N/A	10
83.12	Flt Report & Maint Record	See U-4	RFP App A Supp. Nr 1	AFTO 781 series			A/R	N/A	N/A	8
83.13	Historical Records	See U-5	RFP App A Supp. Nr.	AFTO 829 series			A/R	N/A	N/A	4
83.14	Aircraft Inventory Record	See U-6	RFP App A Supp. Nr. 1	DD 780			A/R	N/A	N/A	40
83.15	GFP Requisition	See U-7	RFP App B Sect. I-4	DD 1348			A/R	N/A	N/A	4
83.16	Work Books	See U-8	RFP App A Sect. I-3				A/R	---	Retain	20
83.17	Flight Report	See U-9	RFP App A Sect. II-4				A/R	---	Retain	4
83.18	Rev. HB Wt & Balance Data	See U-10	RFP App A Sect. IIIa(2)				A/R	With ea	aircraft	16

LINE ITEM NO. a	EST PREP COST FOR SINGLE PREP l
83.9	10
83.10	5
83.11	48
83.12	38
83.13	19
83.14	190
83.15	19
83.16	95
83.17	19
83.18	76

PREPARED BY (Name, title and office symbol)

DATE PREPARED

APPROVED BY (Name, title and office symbol)

DATE APPROVED

DD FORM 1 MAR 63 1423

Page 2 of 2 pages

AFTO Form 210, Maintenance Discrepancy/Production Credit Record

NUMBER [illegible] TSAI (check number)

M-48-63.0

DATE

15 August 1964

OFFICE OF PRIMARY RESPONSIBILITY

AFLC

DDC REQUIRED

Contractors accomplishing depot level maintenance are required to fill out this form indicating the maintenance discrepancy. It is used for the "look" phase of inspection requirements over and above periodics.

REFERENCES (Authority - Regulation, etc.)

AFLCM 65-6
T.O. 00-20A-1
T.O. 00-20E-1
AFM 66-1
BOB 21-R-227

INTERRELATIONSHIP

AFTO 211 and 212

Do not use this item if R-7-43.0 is listed on DD Form 1423.

PREPARATION INFORMATION

Preparation instructions are in Section VI and VII of T.O.s 00-20A-1 and 00-20E-1 and in AFLCM 65-6.

AFLC/AFLC FORM 9 AUG 63

AFPS 3A APR 64, 500

AFTO Form 211, Maintenance Discrepancy/Production Credit Record

M-49-63.0

15 August 1964

OFFICE OF PRIMARY RESPONSIBILITY

AFLC

OCC REQUIRED

This form is used by contractors accomplishing depot level maintenance to report the correction of discrepancies involving removal and replacement of reparable components.

REFERENCES

AFLCM 65-6
T.O. 00-20A-1
T.O. 00-20E-1
AFM 66-1
BOB 21-R-227

INTERRELATIONSHIP

AFTO 210 and 212

Do not use this item if R-7-43.0 is listed on DD Form 1423

PREPARATION INFORMATION

Preparation instructions are in Sections VI and VII of T.O.s 00-20A-1 and 00-20E-1 and in AFLCM 65-6.

AFLC/AFSC FORM AUG 63 9

AFPS SA APR 64

TITLE

AFTO Form 212, Time Compliance Technical Order Work Record

NUMBER (Appropriate TSAF block number)

M-50-63.0

DATE

15 August 1964

USE

This form is used by contractors accomplishing depot level maintenance to report all time compliance technical orders accomplished on selected equipment.

OFFICE OF PRIMARY RESPONSIBILITY

AFLC

DDC REQUIRED

REFERENCES (Authority - Regulation, etc.)

AFLCM 65-6
T.O. 00-20A-1
T.O. 00-20E-1
AFM 66-1
BOB 21-R-227

INTERRELATIONSHIP

AFTO Forms 210 and 211

Do not use this item if C-17-53.2 is listed on DD Form 1423.

PREPARATION INFORMATION

Preparation instructions are in Sections VI and VII of T.O.s 00-20A-1 and 00-20E-1 and in AFLCM 65-6.

AFLC/AFSC FORM AUG 63 9

AFPS SA APR 64. 500

TITLE
Aircraft/Missile Maintenance Production Compression Report (AMPEP).

NUMBER (Appropriate TSAF block number)
L-20-63.0

DATE
18 June 1964

OFFICE OF PRIMARY RESPONSIBILITY
AFLC

DDC REQUIRED
None

REFERENCES (Authority • Regulation, etc.)
AFLCM 55-11
Implementing
AFR 66-3
AFM 55-11
BOB 21-R232

The AMPEP report is directed by Department of Defense for incorporation in the DOD 473L System. This report establishes and maintains the AFLC D-Day readiness maintenance status of all possessed aircraft/missiles undergoing depot maintenance at contractors' facilities or by contractors' depot field teams. In addition it will provide the AFLC Maintenance Engineering Industrial Readiness Production Schedules for all vital air vehicles at contractor facilities for which a maintenance compression capability plan has been developed to expedite the air vehicle return to combat commands when directed pre or D-day.

INTERRELATIONSHIP

None

PREPARATION INFORMATION

The contractor will as of 1500Z Thursday of each week, and daily when directed by the SSM AMA, report the work status of all possessed aircraft/missiles undergoing depot work by contractor or contractor field teams to the SSM AMA. The following information will be submitted. It may be submitted by telephone, teletype or AUTODIN whichever is directed.

1. ITEM NUMBER. This is a line number assigned by the SSM AMA, which indicates a given MDS belonging to a given command being repaired by a specific SRA, and is for cross-reference. Item numbers will be assigned in blocks consistent with the needs, based upon the number of "MDS" that may be assigned to a given "SRA" or "Field Team" for a given "Deliver to Command."

2. SSM-AMA IDENTIFICATION. Standard nomenclature.

3. MISSION (ACFT/MSL). Bombardment aircraft indicated by letter B, Fighter aircraft identified by letter F. Missile decoy identified by letter D, surface attache identified by letter C, etc.

4. DESIGN NUMBER (ACFT/MSL). The number following the mission letter 47, 52, 135, etc.

5. SERIES (ACFT/MSL). Denoted by the alphabetical expression A, B, C, D, etc. which indicates manufacture charge in the metal.

6. Year of SERIAL No. (ACFT/MSL). The first two number of serial number denotes year of manufacture: 59-6321, 59 is the year.

7. Serial no (ACFT/MSL) is assigned by the Air Force number following year in which vehicle was completed and the sequence of compliance 6321 is the serial number.

8. REPAIR ACTIVITY CODE. Will be obtained and assigned by SSM/AMA.

9. DELIVERED TO COMMAND. Who will receive the aircraft or missile after AFLC Depot Maintenance work is completed.

10. OWNING COMMAND. Standard nomenclature. SAC, TAC, ADC, MATS, etc.

11. DATE IN. Actual date the aircraft or missile was received at the Repair Activity. Julian date.

12. DATE OUT. Scheduled date for pickup availability. Julian date.

13. FLOW DAYS. Number of days required to accomplish the maintenance work package for each aircraft or missile.

NOTE: This entry is flexible and will be reported each time a change card is submitted. A change card is not required unless aircraft/missile status is changed.

14. COMPRESSION SCHEDULE. This data will reflect each vital aircraft or missile in maintenance work that can be completed for pickup within 24 hours, 48 hours, 72 hours, or 4 to 7 days if maintenance compression is directed. Aircraft or missiles exempt from MCC will not be shown. "X" in appropriate block.

15. NORMAL PRODUCTION SCHEDULE. This data will reflect the days of on-work progress for each aircraft and missile during the normal production schedule, 24 hours, 48 hours, 72 hours, 4 to 7 days, 8 to 10 days, 11 to 15 days, 16 to 20 days, 21 to 30 days, 31 to 45 days, and over 45 days. This data will reflect the revised schedules when Maintenance Acceleration Capability (MAC) is implemented for any possessed aircraft. "X" in appropriate column.

16. AS-OF DATE. Date of latest information. Julian date.

17. SECURITY CLASSIFICATION. Classification of each card entry; U, C, S, or TS.

NOTE: Normally, the AMREP will be unclassified and marked "for Official Use Only;" however, the security classification may be changed by Hq AFLC or higher authority when conditions dictate.

18. CARD IDENTIFICATION. Detail cards will be identified with an one (1) and summary cards with a two (2) card.

TITLE

Overhaul Contractor Stock Balance Report - AFLC Form11

NUMBER (Appropriate TSAF block number)

L-5-63.0

DATE

15 Aug 1964

OFFICE OF PRIMARY RESPONSIBILITY

AFLC

USE

Primary Purpose: Input into AF Requirements Computation.

Secondary Purpose: Redistribution of AF Owned Inventory.

DOC REQUIRED

REFERENCES (Authority • Regulation, etc.)

AFLC M65-6C
AFM 67-1
BOB 21-R057.5

INTERRELATIONSHIP

PREPARATION INFORMATION

This Contractor shall prepare and submit an overhaul Contractor Stock Balance Report in accordance with the attached instructions.

AFLC/AFSC FORM AUG 63 9

AFPS SA APR 64. 500

Overhaul Contractor Stock Balance Report

a. The contractor will prepare and submit stock balance reports. Non-mechanized activities will prepare the AFLC Form 11, "Overhaul Contractor Stock Balance Reports." Mechanized activities will utilize AF Form 993 series (80 column PCAM card), "General Purpose Summary Card" in preparing this report.

(1) AF cost category I and II items located at contractor facilities for the purpose of repairing or overhauling unserviceable (reparable) end items will be reported quarterly. This includes items used in support of IRAN (Inspection and Repair as Necessary), MRS (Material Repair System), PARC (Progressive Aircraft Repair Cycle), MEDLM (Minimum Essential Depot Level Maintenance), and those required to recondition, modify, and rehabilitate complete aircraft, engines and vehicles. In addition, all "end items" with the exception of aircraft and aircraft engines which fall in the above cost categories (I and II) will also be reported.

(2) Category I and II assets will be quantitatively totaled on one, report in FSC FIIN/MCC sequence for all AF prime contracts, at the respective contractor facility.

(3) Reporting (as of) dates will be 30 June, 30 September, 31 December, and 31 March of each calendar year.

(4) Reports will be submitted to arrive at the respective IM/AMA (SB&CR Control Unit) no later than the 15th calendar day of July, October, January, and April respectively.

(5) Reporting instructions are listed on the reverse side of AFLC Form 11.

(6) Mechanized contractors will utilize the AF Form 993 series, "General Purpose Summary Card," in preparing this report. Card format applicable to mechanized overhaul contractors is as follows:

Field Designation	Card Columns	Type Positions	Punch Instructions Source/Data
FSC	1-4	1-4	Punch Class Code (see note 3)

FIIN/Stock Part Nr/MMC	5-19	6-20	Punch item identify (see note 3)
Blank	20	--	Leave Blank
AF Cost Category	21	23	Punch 1 or 2 as applicable to item being reported. (see note 3)
Report "as of" date			
Months	22	26	Punch the report "as of" date. (see note 3)
Year	23	27	
Contractor identify			
Name	24-32	31-39	Punch abbreviated contractor name. (see note 3)
SNY Shipping Address Code	33-39	43-49	Punch SNY Address Code of AFH Acct Number
Contracting AMA	40-41	52-53	Punch the AMA/Code specified in Chapter 2, Part Two, Volume I.
Supply Status Code	42-46	57-61	See Note 3
Serviceable Balance	47-53	64-70	See Note 3
Unserviceable	54-58	74-78	See Note 3
Condemned	59-62	82-85	See Note 3
Card Identify	80	112	Punch "H"

NOTE 1: Prefix unused columns of fields 42-46, 47-53, 54-58, and 59-62 with zeros. Leave all other unused columns blank.

NOTE 2: Mechanized overhaul contractors will list all report cards on blank, brown, lined paper (single copy) utilizing type positions indicated in the above format. Separate listings will be prepared by class FSC/MMC as applicable). Items will be listed in numerical sequence of FSC/FIIN/MMC.

NOTE 3: See reverse side of AFLC Form 11 for instructions.

(7) AFLC Form 11 (PCAM cards with accompanying printed listings for mechanized contractors) will be packaged by IM/AMA to which they are being submitted. FSCs/MMCs represented by the reports will be listed (i.e., FSC 2740 (or 1560PG) some classes do not have an MMC) on the AF Form 317, Stock Balance and Consumption Report Transmittal. Separate transmittal forms will be prepared for each IM/AMA to which they are being submitted. The transmittal form will be completed in accordance with instruction on the front of the form and submitted (packaged) with the reports.

(8) The contractor will be required to submit this report for any Federal Supply Class/Materiel Management Code (FSCs/MMCs) (i.e., 1560 PG (FSC is 1560; MMC is PG) for all AF Cost Category I and II assets in his possession. Inventory managers assigned to each AMA are listed in Table One, Chapter 2, Part 2, Volume I, AFM 67-1. Defense Supply Agency items, AF Cost Category III items, and Air Force GFAE Items will not be included in this report.

(9) BFB Approval No. 21-R057.5 applies.

OVERHAUL CONTRACTOR STOCK BALANCE REPORT

Form Approved
Budget Bureau No. [illegible]

1. FEDERAL SUPPLY CLASS *(1-4)*

2. AF COST CATEGORY *(20* [illegible]

3. AS OF DATE [illegible]

4. CONTRACTOR IDENTITY

A. NAME *(24-32)*

B. SHIPPING ADDRESS SNY *(33-39)*

5. CONTRACTING AMA [illegible]

FSN *(FOLLOWED BY MMC, IF APPLICABLE)* *(5-19)* A	SUPPLY STATUS CODE *(42-46)* B	SERVICEABLE *(47-53)* C	REPARABLE *(54-58)* D	CONDEMNED *(59-62)* E

AFLC FORM APR 64 11 PREVIOUS EDITION OF THIS FORM WILL BE USED.

INSTRUCTIONS

Preparation and Submission of AFLC Form 11, Overhaul Contractor Stock Balance Report

Commercial contractors that repair or overhaul reparable items for the Air Force, including reconditioning, modification, and rehabilitation of complete aircraft, engines, vehicles and all other major end items of equipment, will be required to prepare and submit quarterly Cost Category I (Hi-Valu) and Cost Category II asset (inventory) reports. This also applies to IRAN contracts.

Contract end items and Government-furnished Property (GFP) will be reported. For the purpose of this report, contract end items are defined as being AF equipment, except complete aircraft and flight propulsion units (engines), upon which work is to be performed by the contractor. Items attached to end items received by the contractor (for repair), including IRAN, will not be reported on this form. GFP is defined as being property provided to the contractor by the Air Force in support of the performance to be accomplished under the terms of the respective contract. This includes contracts applicable to complete aircraft, and flight propulsion units. This also includes items normally supplied by the Air Force, which, due to non-availability from AF stocks and/or otherwise, the contractor has been authorized to procure locally. This does not include items coded for local purchase and/or local manufacture in the applicable AF Stock Catalog publication.

O/H contractors will submit this report to the inventory manager AMA Attn: SB&CR Control Unit. The "as of" date for preparation of reports will be 31 March, 30 June, 30 September and 31 December of each year. Reports will be submitted to arrive at the IM AMA no later than the 15th day of April, July, October and January respectively.

Separate reports (AFLC Forms 11) will be prepared by AF Cost Category I and II. Separate reports will be prepared by FSC. Within FSC, separate reports will be prepared for each assigned materiel management code (MMC). The MMC is the double alpha code such as "AA" or "FG" following the numeric digits of the FIIN.

Card formats applicable to preparation and submission of this report by mechanized contractors will be provided by the contracting AMA in the Supply Appendix of the individual contract. Instructions applicable to preparation of this form by non-mechanized contractors follows:

Item 1 Enter the four digit numeric Federal Supply Class Code.

Item 2 Enter the applicable AF Cost Category I or II, as appropriate.

Item 3 Enter the report "as of" date (31 Mar, 30 Jun, 30 Sep or 31 Dec.

Item 4 Enter the name or abbreviated name of the contractor and the SNY shipping address number assigned to the O/H contractor. If the contractor has no SNY number, enter the AFH Stock Record Account number located at the contractor facility.

Item 5 Enter the abbreviation applicable to the contracting AMA, i.e., SAAMA, MAAMA, etc.

Column A Enter the FIIN, followed by the assigned MMC (when applicable). If the item was received from the Air Force under a stock or part number, the number may be used in reporting the FIIN. (Use of the manufacturer's part number, not recognizable to the Air Force, is not authorized.)

Column B If AF supply support has not been satisfactory, enter "U." If contractor procurement has been accomplished, enter "P" followed by the quantity delivered during the three months covered by the report. If the contractor has serviceable assets available for redistribution the quantity of each individual item will be reported in this column. The IM AMA will provide shipping and/or disposition instructions each reporting cycle for the full quantity reflected in this column. The quantity reported in this column will be a part of (equal to or less than) the quantity reported in Column C, "Serviceable."

Column C Report the total quantity of the item on hand at the contractor facility in serviceable condition. (Include all items requiring AFTO compliance).

Column D Report the total quantity of the item on hand at the contractor facility in reparable condition.

Column E Report the total quantity of the item condemned at the contractor facility during the three months period covered by the report.

NOTE: GFAE Rejects "on hand" at the contractor facility will not be included in this report.

TITLE

Engine Status Report (AF Form 1534)

NUMBER (Appropriate TSAF block number)

L-1-63.0

USE

AF Form 1534 report for contractors is required to comply with directives from Hq USAF that the AF maintain a complete world-wide inventory of all installed and uninstalled aircraft, missile and ground power unit engines on a centralized account at OCAMA. The centralized account is maintained by OCAMA on IBM 7080 tape records as prescribed in Chapter 6, AFM 400-1. Data being collected in accordance with Chapter 5, AFM 400-1 and Contractor Reporting Procedures includes the engine condition status (reparable or serviceable) and whether (See * below)

DATE

15 August 1964

OFFICE OF PRIMARY RESPONSIBILITY

AFLC

DDC REQUIRED

REFERENCES (Authority - Regulation, etc.)

BOB 21-R120.2
Contractor
Reporting
Procedures.

AFM 400-1
Chapter 5

INTERRELATIONSHIP

None

PREPARATION INFORMATION

The contractor shall prepare and submit AF Form 1534 in accordance with instructions contained in Contractor Reporting Procedures BOB 21-R120.2. This publication is published and available from Oklahoma City Air Materiel Area, Tinker AFB, Oklahoma (OCCSP).

* installed or uninstalled. Contractors also report the receipt and shipment of each engine to the centralized account.

AFLC/AESC FORM AUG 63 9

AFPS SA APR 64. 500

TITLE Material Inspection and Receiving Report	NUMBER *(Appropriate TSAF block number)* U-1
USE This form is used at the time of delivery to record acceptance of material delivered to the Goverment.	DATE 2-5-65
	OFFICE OF PRIMARY RESPONSIBILITY
	DDC REQUIRED No
INTERRELATIONSHIP	REFERENCES *(Authority - Regulation, etc.)* ASPR 7-105-7 RFP SA-5-97167 Clause 44

PREPARATION INFORMATION

At the time of delivery under the contract the contractor shall prepare and furnish to the Government, in the manner and to the extent required by the contracting officer, a Material Inspection and Receiving Report (DD Form 250 or comparable form). The Government shall furnish the required forms to the contractor upon request.

AFLC/AFSC FORM AUG 63 **9** **DATA ITEM** PAGE OF PAGES

TITLE

Certificate of Conformance

NUMBER *(Appropriate TSAF block number)*

U-2

DATE

2-5-65

USE

This data permits the contractor to certify without prior Government inspection that material conforms to applicable requirements.

OFFICE OF PRIMARY RESPONSIBILITY

DDC REQUIRED

No

REFERENCES *(Authority - Regulation, etc.)*

RFP
SA-5-97167
Clause
SAPM 71-81

INTERRELATIONSHIP

Delivered with data of U-1

PREPARATION INFORMATION

(a) Notwithstanding (a) of the clause of the contract entitled "Inspection" or "Inspection of Supplies and Correction of Defects", as the case may be, any of the supplies or services to be furnished thereunder may be accepted without prior Government inspection upon receipt of a Certificate of Conformance of the contractor attached to (an invoice or a DD Form 250 as applicable) for supplies or services reading substantially as follows, provided the contractor has been notified by the Inspection Activity that the Certificate is appropriate:

> "I hereby certify that I did, on the (date) of (month) 19___, ship via (Name of Carrier) on (Bill of Lading No., Receipt, etc.), in accordance with shipping instructions issued by the Contracting Officer, the supplies called for by Contract Number (insert contract number), that such supplies were in the quantities and of the quality called for and were in all respects in accord with the applicable specifications or (complete the services) called for by Contract Number (Insert contract number), item (insert item number) and that such services were in the quantity and of the quality called for, and were in all respects in accord with the applicable specifications. This statement is furnished to support payment of the attached invoice."

(b) Notwithstanding any provisions of the certificate above referred to, and notwithstanding the provisions of paragraph (c) of clause thereof, entitled "Inspection" or "Inspection of Supplies and Correction of Defects" as the case may be, the liability of the Contractor with respect to supplies accepted by the Government under the provisions of paragraph (a) above will, after inspection by the Government or after the expiration of reasonable time following delivery to the Government within which inspection may be made, whichever occurs first, be limited, except as to supplies rejected upon such inspection, to liability for latent defects, fraud, or such gross mistakes as amount to fraud.

(c) Five copies of the Certificate of Conformance will be attached to copies of the DD Form 1155 or DD Form 250 which are provided the Air Force Accounting and Finance Officer paying the contract.

TITLE Value Engineering Cost Reduction Proposal	NUMBER *(Appropriate TSAF block number)* U-3
E This data item provides for proposals for cost reduction to be submitted for processing by the Government.	DATE 2-5-65
	OFFICE OF PRIMARY RESPONSIBILITY
	DDC REQUIRED No
	REFERENCES *(Authority - Regulation, etc.)* RFP SA-5- 97167 Clause SAPM 71-76
INTERRELATIONSHIP	

PREPARATION INFORMATION

Cost reduction proposals shall be prepared in accordance with Contract Clause SAPM 71-76 dated 18 November 1964.

AFLC/AFSC FORM AUG 63 9

DATA ITEM

PAGE OF PAGES

TITLE

Flight Report & Maintenance Record

NUMBER *(Appropriate TSAF block number)*

U-4

USE

These forms provide a maintenance record for material used by the Government.

DATE

2-5-65

OFFICE OF PRIMARY RESPONSIBILITY

ODC REQUIRED

No

REFERENCES *(Authority - Regulation, etc.)*

RFP
SA-5-97167
App A Supp. Nr. 1

INTERRELATIONSHIP

Data Item U-5

PREPARATION INFORMATION

The 781 series forms for the work accomplished under the conditions stated in the contract shall be maintained and completed in accordance with TO 00-20A-1. All systems that are authorized to be inoperative will be lised on applicable AFTO 781 series forms as inoperative.

TITLE

Historical Records

NUMBER *(Appropriate TSAF block number)*

U-5

DATE

2-5-65

USE

These forms provide a historical record of work accomplished on material used by the Government.

OFFICE OF PRIMARY RESPONSIBILITY

DDC REQUIRED

No

REFERENCES *(Authority - Regulation, etc.)*

RFP
SA-5-97167
App. A Supp. No.

INTERRELATIONSHIP

Data Item U-4

PREPARATION INFORMATION

The 829 series forms for the work accomplished under the conditions stated in the contract shall be maintained and completed in accordance with TO 00-20A-1. An entry will be made under remarks on DD Form 829 to indicate that the material was processed in accordance with Maintenance Compression work requirements.

AFLC/AFSC FORM AUG 63 **9** **DATA ITEM** PAGE OF PAGES

TITLE Aircraft Inventory Record (DD 780)	NUMBER *(Appropriate TSAF block number)* U-6
USE This form provides a current record of the configuration of an aircraft.	DATE 2-5-65
	OFFICE OF PRIMARY RESPONSIBILITY
	DDC REQUIRED No
INTERRELATIONSHIP	REFERENCES *(Authority - Regulation, etc.)* RFP SA-5-97167 App. A Supp. No. 1

PREPARATION INFORMATION

Inventory of Form DD 780 and procedures outlined in TO 00-35D-780 will be held to minimum readiness essentials on aircraft which are in the condition categories stated in the contract. Inventory inspection should be accomplished simulataneously with the postflight inspection.

TITLE Government Furnished Property Requisition (DD-1348)	NUMBER *(Appropriate TSAF block number)* U-7
USE This form is used to requisition Government Furnished Property required in connection with work performed under contract.	DATE 2-5-65 OFFICE OF PRIMARY RESPONSIBILITY DDC REQUIRED No REFERENCES *(Authority - Regulation, etc.)* RFP SA-5-97167 App. B Section I-4
INTERRELATIONSHIP	

PREPARATION INFORMATION

Contractors receive an initial level of direct supply support. The follow-on support requirements will be made by requisition for GFP and will be prepared and submitted by the contractor on appropriate forms of the DD Form 1348 series or as prescribed by the Department of Defense Military Standard Requisitioning and Issue Procedure (MILSTRIP). Air Force instructional guidance is contained in the requisitioning, priority system and shipping chapters of AFM 67-1.

TITLE Work Books	NUMBER *(Appropriate TSAF block number)* U-8
USE This work book is used to list work to be accomplished and provides a place to record such accomplishment.	DATE 2-5-65
	OFFICE OF PRIMARY RESPONSIBILITY
	DDC REQUIRED No
	REFERENCES *(Authority - Regulation, etc.)* RFP SA-5- 97167 App. A Section I-3
INTERRELATIONSHIP	

PREPARATION INFORMATION

Prepare appropriate work books for each aircraft, containing aircraft serial number, the equipment or system to be modified, a list of the work to be accomplished, and provisions for showing that the work has been accomplished.

These books are normally retained by the contractor and are available for Government inspection.

TITLE Flight Report	NUMBER (*Appropriate TSAF block number*) U-9
USE This report provides pilot information concerning discrepancies in aircraft received under maintenance contracts.	DATE 2-5-65
	OFFICE OF PRIMARY RESPONSIBILITY
	DDC REQUIRED No
INTERRELATIONSHIP	REFERENCES (*Authority - Regulation, etc.*) RFP SA-5-97167 App. A, Section II-4

PREPARATION INFORMATION

A detailed written Flight Report will be prepared with the incoming pilot in a Post Flight Briefing Conference with contractor personnel. The report will include all outstanding discrepancies or malfunctions of aircraft systems and will be in sufficient detail to furnish work requirement information on malfunctioning equipment or systems.

AFLC/AFSC FORM AUG 63 **9** **DATA ITEM** PAGE OF PAGES

TITLE

Revised Handbook of Weight & Balance Data

NUMBER *(Appropriate TSAF block number)*

U-10

USE

Revisions to this Handbook are required to update the material for aircraft which have been modified.

DATE

2-5-65

OFFICE OF PRIMARY RESPONSIBILITY

ODC REQUIRED

No

REFERENCES *(Authority - Regulation, etc.)*

RFP
SA-5- 97167
App. A, Section
IIIa(2)

INTERRELATIONSHIP

PREPARATION INFORMATION

Bring the Handbook of Weight and Balance Data TO 1-1B-40, up to date using Basic Weight Check List and Loading Data Charts in Aircraft -5 Handbooks, LAW TO's 1-1B-41, -50, -52 and 35B2-1-2.

F-102 SRA

AGE REQUIREMENTS

(MINUS JEFM)

ATTACHMENT 1

STOCK NR	NOMENCLATURE	PART NR	QTY
1055-[illegible]	Rocket tube, cleaning brush	SE1029-801	4
1375-542-0292	M-3 Initiator (dummy)		2*
1730-030-8001	Cradle assy	SE0593-817	1
1730-035-4586	Cover assy pitot tube	SE0959-801	36
1730-035-6319	Cradle assy	SE0593-819	1
1730-065-7056	Purging kit, Lox	KMU-78/E	3
1730-203-8998	Steering bar, nose wheel, hand	SE0981	3
1730-219-5712 (780) *	Eyebolt	SE0738	18
1730-268-9822	Wheel chocks	50D6602	31 sets *
.730-294-3223	Bar assy, A/C nose jacking	SE0877	9 *
1730-294-4175	Sling acft maint canopy	SE0576-801	2
1730-294-9137	Maintenance platform fixed type	SE0867-801	8
1730-305-8607	Aircraft restraining bridle	SE0583	5 *
1730-305-8614 (780) *	Lock assy	SE0746-801	72
1730-331-5131	Pad intake	SE0778-801	36
1730-331-9445	Guard ram air turbine fan	SE0917	36 *
1730-335-0108	Lock assy	SE0808-801	72
730-341-1971	Hoist fitting	SE0889-1	2
1730-341-1972	Hoist fitting	SE0889-2	2
1730-341-8948	Walkway	SE0980	15*
1730-341-8963	Sling assy canopy	SE0825	3
1730-346-9932 (780)*	Plug assy	SE0822-1	3
1730-346-9933 (780)*	Plug assy	SE0822-2	3
1730-349-4068	Cover assy canopy and radome	SE0803-801	8
1730-390-2781	Maintenance platform, Type C-1		18
1730-390-5618	Maintenance platform, Type B-1		9

* Assuming quantity received with each aircraft.

STOCK NR	NOMENCLATURE	PART NR	QTY
1730-390-5620	Maintenance platform, Type B-2		9
1730-395-6720	Pad assy wing	52D6695-1	18
1730-508-9797	Lock pin set	SE0903-803	36
1730-508-9807 (780)*	Support assy	SE0990-801 (TF)	4
1730-516-2019	Jack hyd 10 ton Type B6 (R/S 5120-246-9178)		36
1730-517-0237	Ladder cockpit entrance	SE0807-801	26*
1730-522-2734	Cord assy single missle door operation	SE1028	4
1730-544-2857 (780)*	Shield assy intake duct	SE0824-1	4
1730-546-6123 (780)*	Lock assy nose landing gear door	SE1051	4
1730-554-5437	Ladder cockpit entrance TF-102A	SE0820-803	6 *
1730-554-5438	Ladder cockpit entrance TF-102A	SE0820-804	6 *
1730-555-5130	Sling assy wing hoisting	SE0573-801	2
1730-555-7040	Adapter assy J57 afterburner	SE0730-805	8
1730-560-7226	Adapter cradle set - radome removal	SE1052	8 *
1730-561-1485 (780)*	Transducer vane guard	SE1048	8
1730-566-3434 (780)*	Transducer vane guard	SE1069	4
30-566-3435	Handle Q intake cover installation	ST00559	4
1730-568-9557	Lock assy MLG door	SE0991	14
1730-570-1150	Lock assy speed brake	SE0879-801	40
1730-570-5027	Cord assy armament remote control	SE0907-803	2
1730-570-5034	Support assy radar door hold-open	SE0871-801	18
1730-571-7041	Cover assy drag chute	SE1056	7
1730-573-5113	Adapter kit, engine trans	[illegible]	12 *
1730-573-5114	Adapter kit, engine trans	105065	12 *

STOCK NR	NOMENCLATURE	PART NR	QTY
1730-573-5119	Bracket assy engine roller	SE1024	16*
1730-586-4953	Support engine access doors	SE1082-801	24
1730-589-9451 (780)	Lock assy nose landing gear door	SE1031-801	12
1730-590-1960 (780)	Shield assy exhaust tailpipe	SE0827-803	18 *
1730-590-1961 (780)*	Shield assy intake duct	SE0824-003	4
1730-590-1962 (780)*	Shield assy intake duct	SE0824-004	4
1730-590-7566 (780)*	Pin assy fuel tank safety switch	SE1100	9
1730-591-1466 (780)*	Shield assy intake duct	SE0814-3	7
1730-591-1467 (780)*	Shield assy intake duct	SE0814-4	7
30-591-8555 (780)	Support assy canopy	SE1023-805	8
1730-593-3022 (780)	Cover assy canopy and radome (R/S 1680-593-3022)	SE0818-803	4
1730-604-1692 (780)*	Cover assy Q intake (R/S 1680-604-1692)	SE0844-803	18
1730-609-0047 (780)	Plug assy boundary layer duct	SE0812-805	24
1730-624-9400	Screen assy intake duct	SE1104-1	2
1730-624-9401	Screen assy intake duct	SE1104-2	2
1730-630-8399	Screen assy intake duct	SE1103-2	4
30-631-3195	Screen assy intake duct	SE1103-1	4
1730-631-6468	Clamp NLG strut restraining	SE1116	6
1730-640-7155	Jack-pad	SE0580-7	36
1730-640-8080	Towbar, Universal nose wheel	SE0982	9
1730-646-7513	Adapter kit fuselage tail cone	SE0731-801	15 *
1730-660-0831	Sling assy aircraft hoisting	SE0892-805	1
1730-660-0992	Sling assy J57 engine handling	SE0945-803	3 *
1730-672-6584	Bar assy emergency nose jacking	SE1040-805	2
1730-691-9835	Support radome storage	SE0918	15 *

STOCK NR	NOMENCLATURE	QTY
1730-692-0003	Rail set engine removal	10
1730-692-0011	Support assy engine center (R/S 1740-692-0011)	7
1730-885-7456	Cover assy, wing tan	
1740-030-2294	Basic cart	
1740-555-6602	Dolly	
1740-563-1339	S	
1740-697-2746		
1740-713-59		
392		
4310		
4310-595-3		
4440-529-3740		
4520-720-0176		
4730-666-2118	Co	

STOCK NR	NOMENCLATURE	PART NR	QTY
4920-895-5394	Filler and bleeder hyd sys (R/S 4910-334-8727)	MONEN2120	6
4920-092-7953	Tester temperature instrument	MJ1	2
4920-216-7026	Pin set, wing installation aligning	ST00527	2
4920-273-1668	Tester cabin pressure leakage portable self contained unit gas eng dr 2 PSI Type MB-1		3
4920-324-9703	Locator-fuel manifold	PWA 8060	2
4920-331-7397	Rudder rigging tool	20525	8
4920-331-9451	Shroud positioning wedge	SE0883	8
4920-332-6895	Tester gyro test motor 110-115V AC	T100060	2
4920-545-2439	Table, Scorsby	KT 426636	1
4920-338-2601	Test set cabin temp control	SE0858	3
4920-346-7335	Holder afterburner fuel manifold	PWA-8058	2
4920-348-2445	Turntable instrument test no 1256		2
4920-398-2928	Fixture oil screen propeller shaft	PWA-7153	4
4920-490-2840	Panel assy instrument test	618200	2
4920-507-3599	Test set engine trim kit	E2452	3
4920-509-1508	Tester, fuel qty	MD2A	3
1740-512-0550	Adapter assy Sunstrand handling	SE0904-801	3
4920-513-3610	Test unit armament relay box	SE1036	2
4920-534-7477	Test assy warning control box	F213-1	2
4920-545-1059	Test assy-kit ram air turbine	SE0796	2
4920-562-1770	Bracket assy hyd hose support	SE0952-801	15
4920-565-0192	Tester elevator loader	SE0985	3
4920-565-2873	Simulator, magnetic detector	KT 426639	4
4920-588-7131	Adapter air conditioner duct	SE1068	4

STOCK NR	NOMENCLATURE	PART NR	Q'TY
5180-589-3572	Access kit fuel tank repair (R/S 4940-589-3572)	ST00431-803	3
4920-593-4316	Tester leakage	TTU-28/E	3
4920-601-2634	Rocket pull tester	SE1066	4
4920-601-6923	Tester pressurized cabin leakage Type AF-N24T		3
4920-601-7197	Controller flt cont sys analyzer	SE1097-1	4 *
4920-601-7198	Accessories case flight control system analyzer	SE1097-3	3 *
4920-601-7199	Accessories case	SE1097-5	1
920-601-9374	Support assy canopy	SE1023-807	30 *
4920-604-1773	Test unit intervalometer sequence	SE0594-801	4
4920-607-9340	Protractor speed brake doors	SE1101	4
4920-610-8871	Tester automatic flight control	SE0984-801	4
4920-614-6670	Control pneumatic launcher rigging	SE1084	4
4920-614-8494	Inertia reel tester	3101101-0	2
4920-618-3095	Test stand hyd system elec mtr dr Type MK-3A		5 *
4920-618-8993	Test stand hyd system gas eng dr Type MJ-2A		4 *
4920-670-9414	Tester elec heated windshield (R/S 4920-573-2974)	SE1002-801	2
4920-675-4247	Tester heat windshield (R/S 4920-565-4947)	SE1001-801	2
4920-690-8316	Gage and hose assy (oil pressure warning light)		4
4920-693-7904	Meter, frequency reference	650399	3
4920-707-4580	Tester cont cable fire det (R/S 4930-546-6506)	SE0997-801	4
4920-735-7920	Test set gyro drift		2

4920-791-4840	**Survival kit tester**	**20600-5**	**1**
4920-801-8771	Test box, pneumatic actuators	61H25394	1
4920-813-3287	Tester pitot static system Type TTU-93/E (R/S 4920-580-2303)		4
4920ND000062P	Set, moisture removal		2*
4930-330-4095	Adapter assy defueling	SE0896	2*
4930-693-1242	Funnel fuel tank sump drain (R/S 4920-693-1242)	SE0787-801	6
4940-242-4101	Separator, oil and water		10
4940-972-6403	Gun fuel tank sealing		3
4940-693-2722	Spray outfit Type MA-2		2
5120-028-3622	Wrench, main and nose ldg wheel	ST00520	3
5120-030-2371	Wrench, shock strut		2
5120-092-8529	Wrench, strut socket		2
5120-095-3248	Wrench pressure relief valve	PWA-7248	2
5120-098-4388	Socket wrench face spanner 4 prong	PWA-7391	2
5120-098-4477	Wrench tube nut	PWA-7358	2
5120-203-4697	Jack, hyd hand 10 ton cap Type A-3		9
5120-212-2474	Puller tach dr shaft gr seal HSG	PWA-7146	2
5120-212-2487	Puller turbine rear brg oil suct pump	PWA-7174	2
5120-212-2946	Puller nose land gr trunion pin	ST00478	2
5120-303-0916	Wrench seal nut	PWA-7125	2
5120-303-1074	Wrench, spanner	650179	2
5120-311-3477	Tool, installing rocket tube	ST00537	3
5120-313-7004	Wrench spanner 180 deg angle	ST00506	6
5120-329-6398	Screwdriver offset gyro cap	650190	4

35A

STOCK NR	NOMENCLATURE	PART NR	QTY
5120-329-6407	Preload tool brg ident no 10131-399		2
5120-341-9092	Positioning tool bellows	650340	3
5120-343-0053	Puller mechanical steel	PWA-8041	2
5120-348-4846	Puller mechanical	PWA-8042	2
5120-398-2915	Drift tach and suct pump dr sh seal	PWA-6841	3
5120-522-3063	Wrench socket	650180	8
5120-525-7013	Extractor set roll pins	ST00558	3
5120-525-7014	Wrench socket	ST00561	2
5120-541-5808	Crimping tool, certilock	47093	9
5120-541-7251	Crimping tool	59021	6
5120-555-1621	Canopy latch mechanism	8-75642	3
5120-560-7250	Wrench power irreversible	ST00560	3
5120-562-3159	Pin set rudder and elevator rigging	SE0979-801	4
5120-562-3179	Crimping tool	47043	6
5120-570-7652	Wrench-retract snubber guide		2
5120-573-2961	Wrench launcher rigging	ST00569	5
5120-573-3425	Puller mechanical	ST00563	3*
5120-574-9386	Wrench torque elev horn	ST00565	2
5120-574-9441	Adapter elevon bolt attach	ST00549-801	2
5120-596-4467	Wrench	650172	8
5120-596-9313	Crimping tool	MS25037-1	15
5120-607-9345	Wrench torque wing att	ST00564-7	2
5120-612-9876	Installation tool, stud ring retainer		3
5120-656-3876	Wrench	PWA-8354	2
5120-697-1574	Wrench pinion adj flight cont	650306	7
5120-712-0525	Punch, Camloc		3

STOCK NR	NOMENCLATURE	PART NR	QTY
5120-712-0521	Flaring die Camloc		3
5130-242-7223	Hammer pneu port rivet		12
5120-811-7752	Hand tool	MR8-33T	6
5130-243-1303	Riveter blind pneu 9-32 in cap (R/S 5130-490-8322)		5
5130-568-0421	Driver jo-bolt pneumatic		4
5130-596-4506	Gun pneumatic rivet (R/S 5130-691-9550)		10
5130-621-2647	Shaver rivet pneu portable		30
5180-573-2914	Wrench set torque	ST00566	4*
5220-302-5374	Gage-elevon pendulum rigging	SE0766	4
5220-329-6408	Gage-sup hub working	10134-399	3
5220-331-6058	Gage driven hub working	10132-399	3
5220-347-2282	Gage rudder rigging	SE0767-801	4
5220-511-1498	Gage rudder rigging	SE0767-803	4
5220-525-6862	Gage guide vane nozzle checking	PWA-8064-1	3
5220-525-6863	Gage guide vane nozzle checking	PWA-8064-2	2
5220-571-1154	Gage drag chute mech adj	ST00567	5*
5220-588-6034	Gage landing gear door adj	ST00570	5
5220-589-9506	Gage elevon rigging protractor	SE1088-1	5
5220-589-9507	Gage elevon rigging protractor	SE1088-2	5
5220-590-2095	Gage fuel tank latch overcenter	ST00571	5
5220-592-9670	Gage rigging rudder angle	SE0767-805	2
5220-613-6620	Gage control surface deflection (R/S 5210-613-6620)	SE0987	4
5820-219-7454	Antenna	AT-197GR	2
5821-505-0945	Receiver-transmitter, radio	RT 263-ARC-34	2

F-102 SRA

JEFM AGE REQUIREMENTS

ATTACHMENT 2

STOCK NR	SHORT TITLE	PART NR	QTY
1730-554-1728	Adapter, Hoisting	PWA8323	2
1730-554-6580	Adapter, eng lift frt	PWA8358	1
1730-570-9009	Support assy	PWA10141	1
1730-604-1668	Hoisting unit	104955 Model 4600	2
1730-612-9508	Support	PWA8330	4
1730-672-5855	Sling	PWA8417 or PWA7499	2
1730-672-6890	Sling	PWA8417 or PWA7499	2
1730-696-6589	Adapter, Hoisting	PWA6567	1
1730-696-6592	Sling	PWA6580	1
1730-696-6593	Adapter, Hoisting	PWA6581	1
1730-696-6671	Adapter, Hoisting	PWA7027	1
1730-696-6679	Adapter, Hoisting	PWA7054	2
1730-696-6684	Adapter, Hoisting	PWA7069	1
1730-696-6736	Adapter, Hoisting	PWA7251	1
2995-333-4816	Starter Assy	501256	2
3920-037-5139	Truck	PWA7355	2
3920-297-4511	Truck	PWA7064	1
4920-025-2736	Holder, oil press	PWA4586-14	1
4920-048-7369	Holder, front compr rotor	PWA7335	1
4920-048-7377	Base	PWA7345	1
4920-955-2681	Adapter, fuel manifold air & fuel check	PWA17446	1
4920-169-8126	Guide	PWA3095	1
4920-083-1481	Cover	PWA16988	1
4920-086-6900	Stand, eng , Type MMU-31E Model 3100B	(C/F1730-529-8452)	4*
4920-098-4397	Collar, wrench guide	PWA7489	1
4920-211-2678	Cover	PWA7066	1

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GD|C-65-042

(No Master Copy)

Inspection and Repair as Necessary (IRAN) Program F-102A and TF-102A Aircraft

Supplemental Information

February 1965

GDC-65-042 Supp.

GD|C-65-042

INSPECTION AND REPAIR AS NECESSARY (IRAN) PROGRAM F-102A AND TF-102A AIRCRAFT

SUPPLEMENTAL INFORMATION

February 1965

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MAINTENANCE CONCEPT OF IRAN CYCLE

The maintenance concept of the IRAN cycle is depicted in the sequence and flow block diagram, and accompanying PERT networks. Separate PERT networks are shown for the aircraft and engine.

All requirements of the IRAN cycle have been included in the Convair proposal. To determine the total manhours required to accomplish Items 1, 1a, 2, and 2a of the RFP, it was necessary to establish a fixed value in manhours per aircraft for certain undefined tasks. Included in the Convair proposal for Item 1a, and 2a of the RFP are the following manhour allowance for the undefined tasks:

1. Repair or replacement of defective items or components, minor structural repair of aircraft — 385 manhours per aircraft.
2. Minor repair or replacement of items or components of engine — 139 manhours per engine.

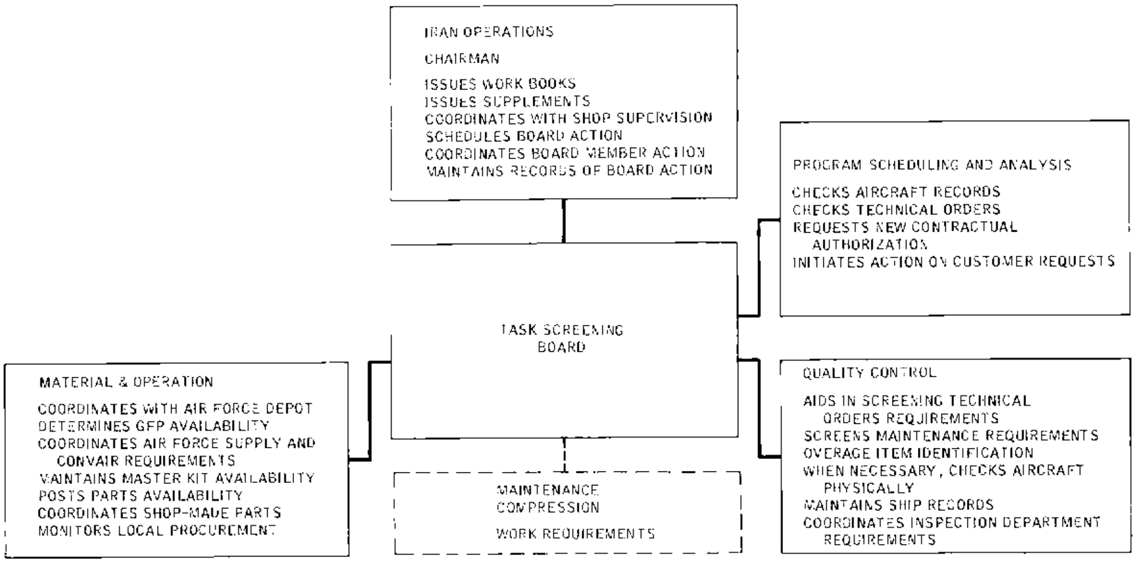
Additionally, the following allowances and or conditions have been included in the totals for Items 1, 1a, 2, and 2a:

1. Each aircraft will require three flights.
2. Engine rejection rate will be 17 percent. The average aircraft engine will require 310 manhours of work including JEFM, repair, etc., excluding engine buildup.

3. Canopy glass panels will require 50 percent replacement.

4. Organizational maintenance of AGE is included. Field and depot level maintenance of AGE is not included.

5. Calibration of test equipment is not included.


IRAN OPERATIONS
CHAIRMAN
ISSUES WORK BOOKS
ISSUES SUPPLEMENTS
COORDINATES WITH SHOP SUPERVISION
SCHEDULES BOARD ACTION
COORDINATES BOARD MEMBER ACTION
MAINTAINS RECORDS OF BOARD ACTION
PROGRAM SCHEDULING AND ANALYSIS
CHECKS AIRCRAFT RECORDS
CHECKS TECHNICAL ORDERS
REQUESTS NEW CONTRACTUAL AUTHORIZATION
INITIATES ACTION ON CUSTOMER REQUESTS
TASK SCREENING BOARD
MATERIAL & OPERATION
COORDINATES WITH AIR FORCE DEPOT
DETERMINES GFP AVAILABILITY
COORDINATES AIR FORCE SUPPLY AND CONVAIR REQUIREMENTS
MAINTAINS MASTER KIT AVAILABILITY
POSTS PARTS AVAILABILITY
COORDINATES SHOP-MADE PARTS
MONITORS LOCAL PROCUREMENT
MAINTENANCE COMPRESSION
WORK REQUIREMENTS
QUALITY CONTROL
AIDS IN SCREENING TECHNICAL ORDERS REQUIREMENTS
SCREENS MAINTENANCE REQUIREMENTS
OVERAGE ITEM IDENTIFICATION
WHEN NECESSARY, CHECKS AIRCRAFT PHYSICALLY
MAINTAINS SHIP RECORDS
COORDINATES INSPECTION DEPARTMENT REQUIREMENTS

Task Screening Board Functional Responsibilities

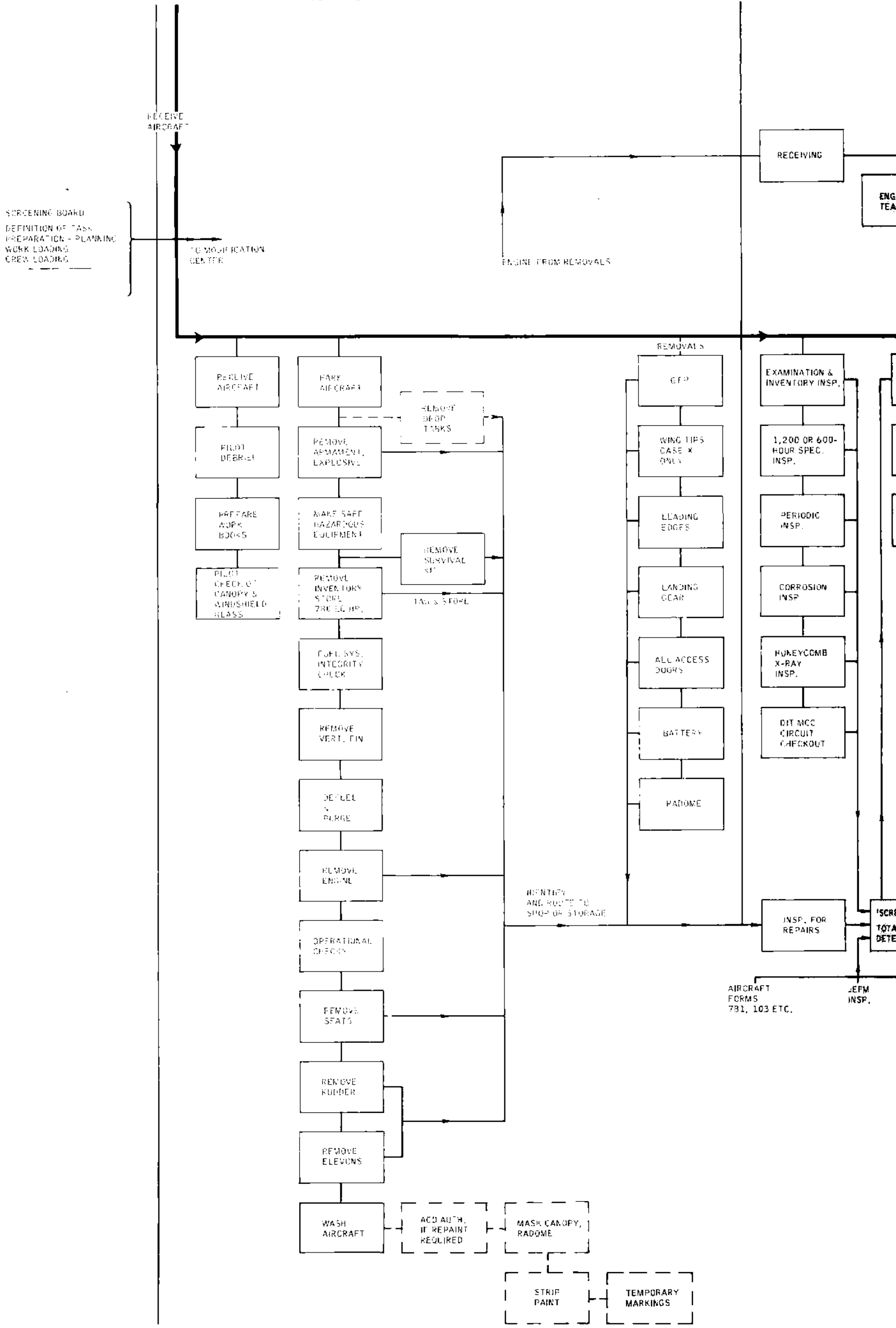
TASK SCREENING BOARD

Convair experience with prior modification programs has proved the importance of maintaining a task control system to analyze work requirements for each aircraft. For the F/TF-102A IRAN program, the task screening board will ensure adequate preplanning and control of this task. This screening board will be composed of technically qualified personnel, directly responsible for the support of this activity.

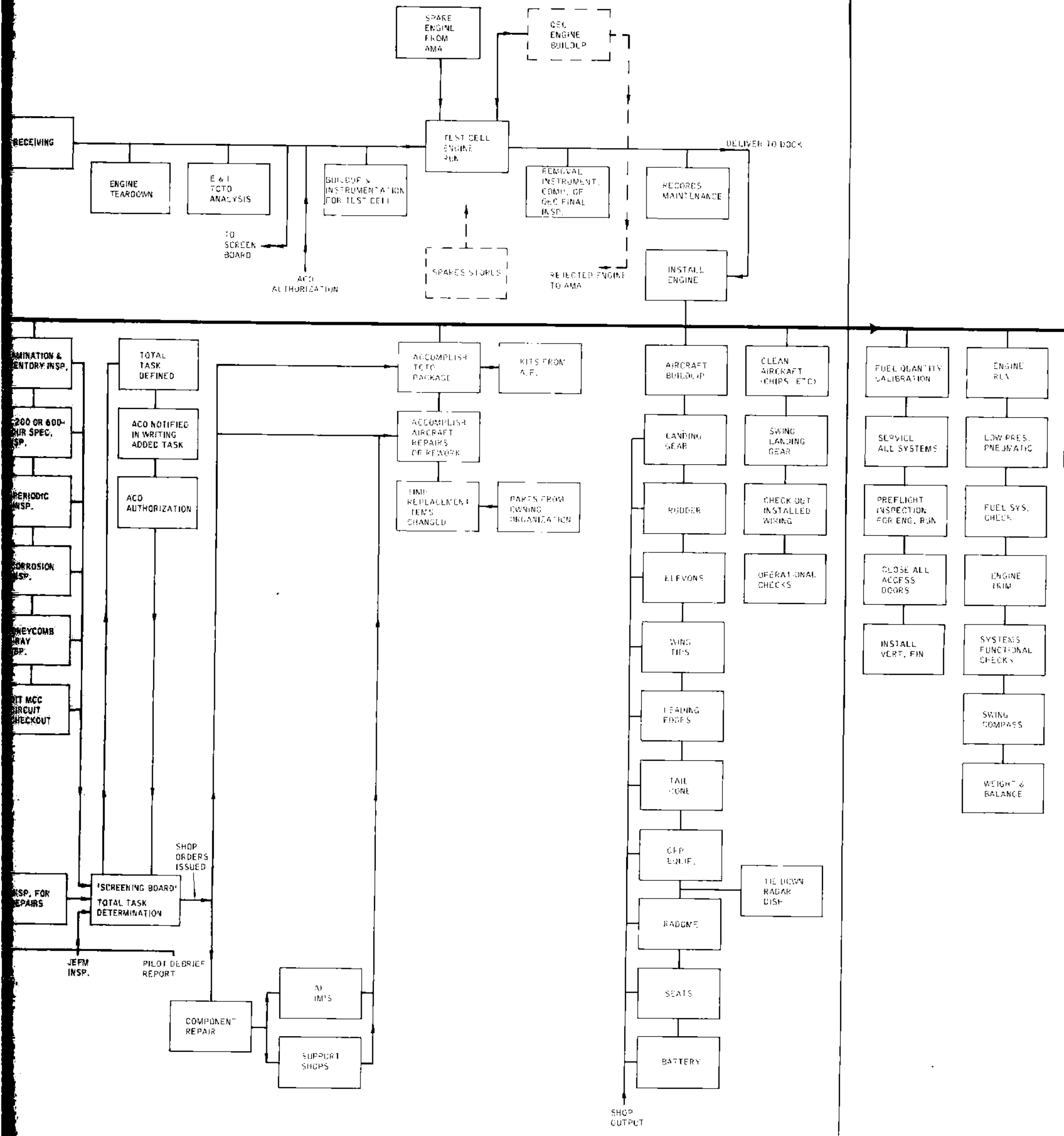
The basic responsibility of this group is to define and integrate the requirements of each aircraft into a total task plan, thereby ensuring successful coordination of supply, manpower, facilities, records, and task accomplishment.

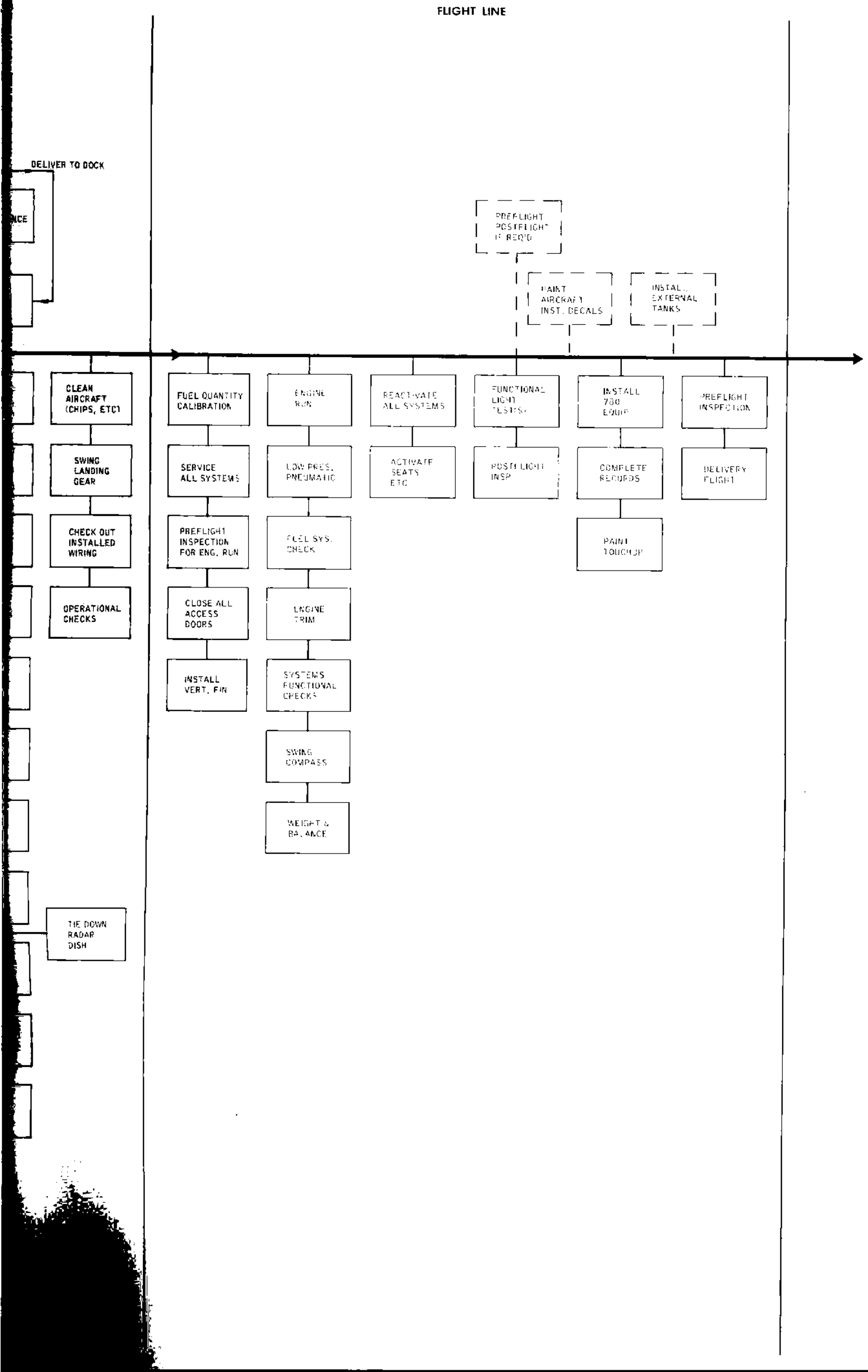
The task screening board will convene prior to the receipt of each aircraft to review the AFTO Form 103 condition reports, and to determine the compliance status of kit and not-kit technical orders. Upon receipt of the aircraft, the historical records, inspection reports and pilot's data will be thoroughly analyzed for auditing and compiling the net task to be accomplished.

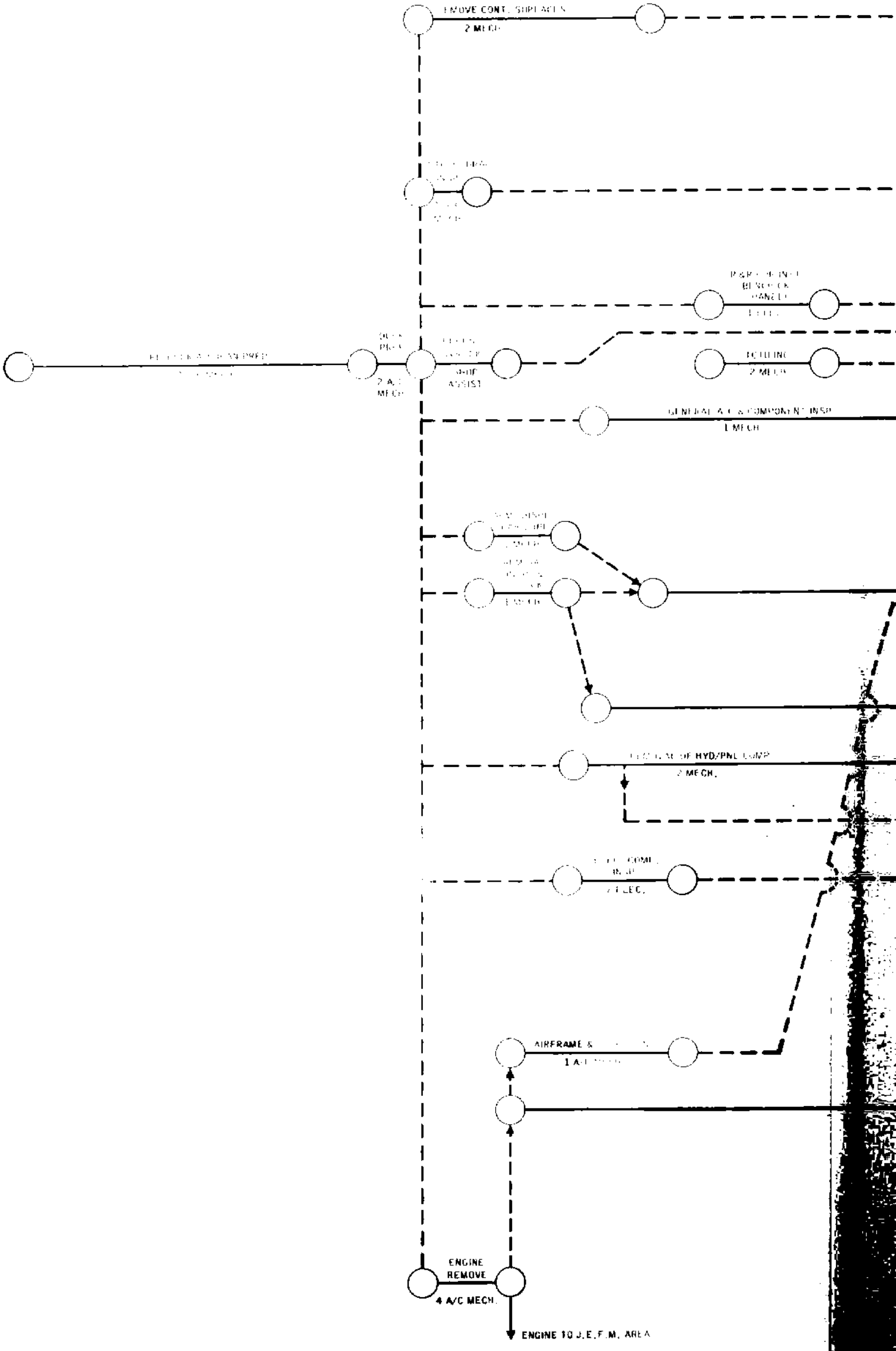
RECEIVING AND PREPARATION FOR MAINTENANCE

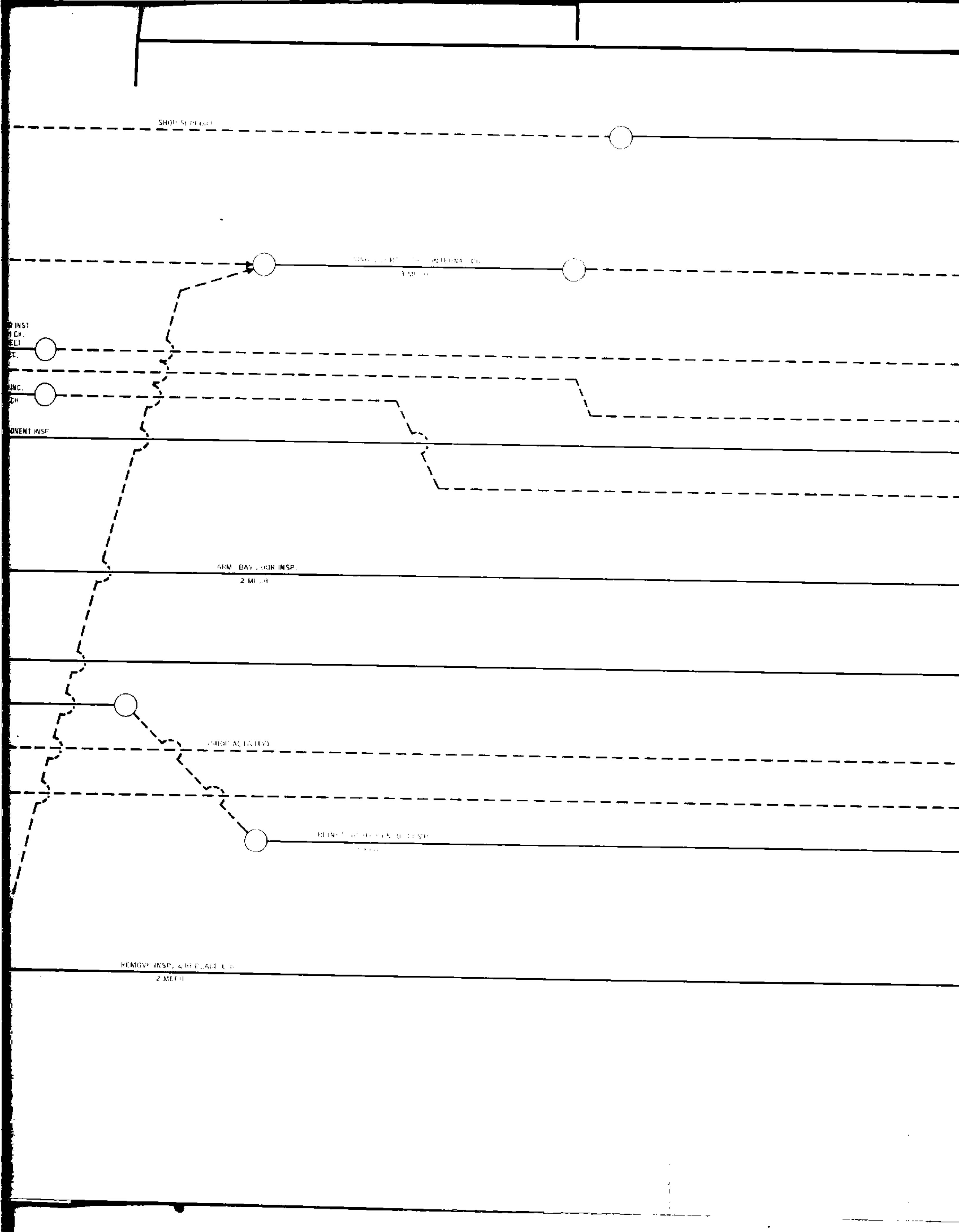


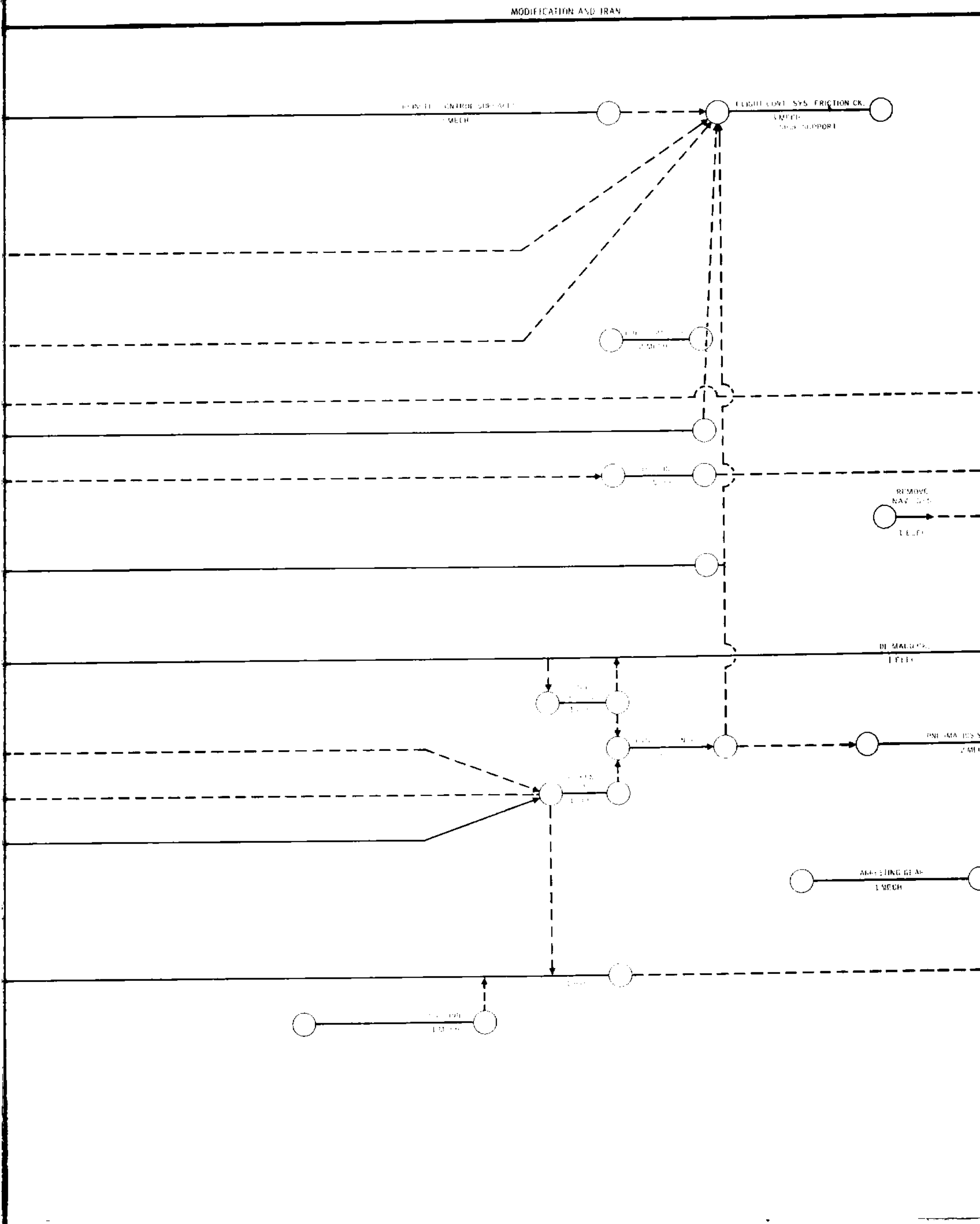
MODIFICATION/IRAN AREA

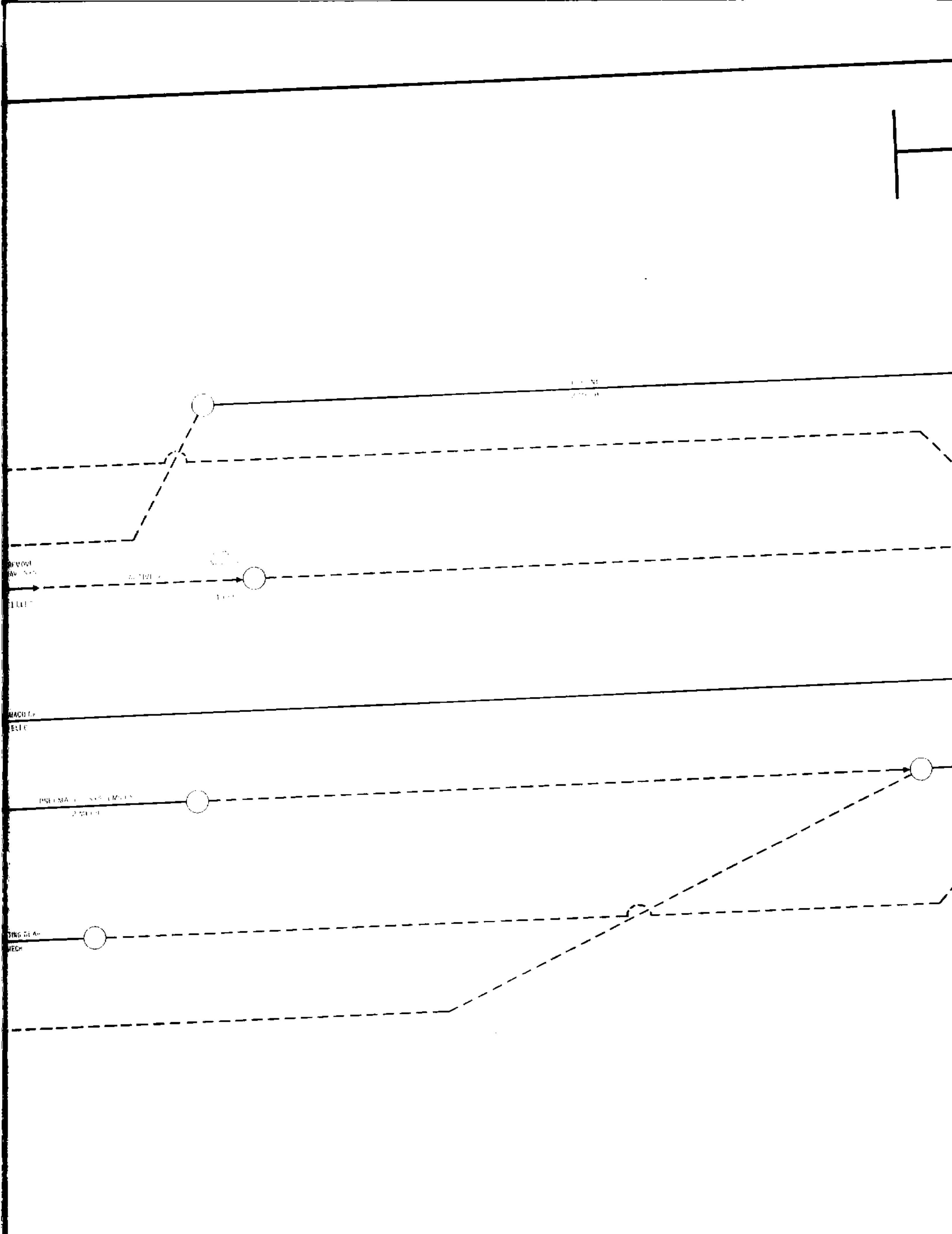


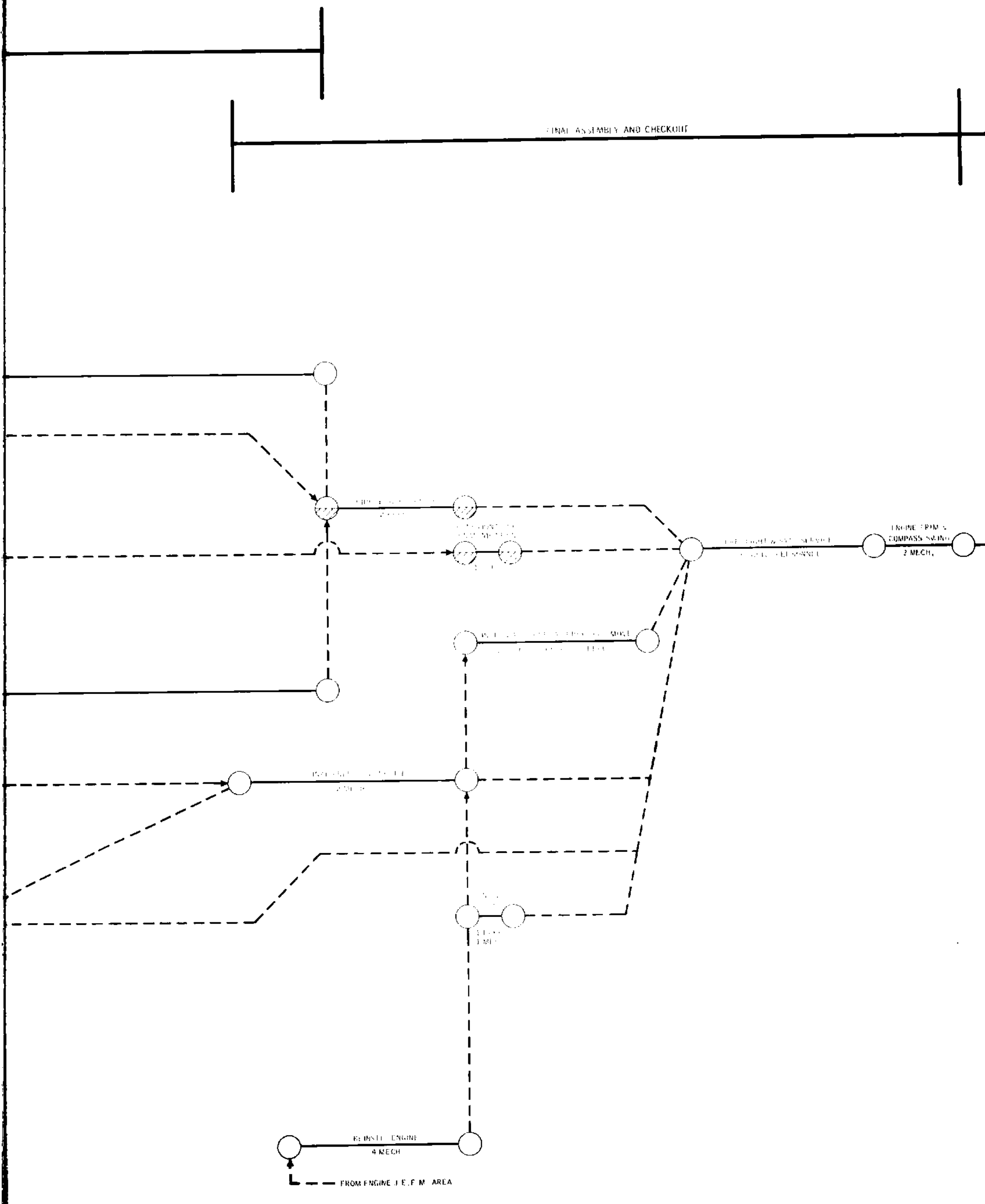

FLIGHT LINE
DELIVER TO DOCK
NCE
PREFLIGHT POSTFLIGHT IF REQ'D
PAINT AIRCRAFT INST. DECALS
INSTALL EXTERNAL TANKS
CLEAN AIRCRAFT (CHIPS, ETC)
SWING LANDING GEAR
CHECK OUT INSTALLED WIRING
OPERATIONAL CHECKS
TIE DOWN RADAR DISH
FUEL QUANTITY CALIBRATION
SERVICE ALL SYSTEMS
PREFLIGHT INSPECTION FOR ENG. RUN
CLOSE ALL ACCESS DOORS
INSTALL VERT. FIN
ENGINE RUN
LOW PRES. PNEUMATIC
FUEL SYS. CHECK
ENGINE TRIM
SYSTEMS FUNCTIONAL CHECKS
SWING COMPASS
WEIGHT & BALANCE
REACTIVATE ALL SYSTEMS
ACTIVATE SEATS ETC
FUNCTIONAL FLIGHT TEST(S)
POSTFLIGHT INSP
INSTALL 780 EQUIP
COMPLETE RECORDS
PAINT TOUCHUP
PREFLIGHT INSPECTION
DELIVERY FLIGHT


EMOVE CONT. SURFACES
2 MECH
DUCK
PREP
2 A/C
MECH
SHOP
ASSIST
BENCH CK
PANELS
ECTLING
2 MECH
GENERAL A/C & COMPONENT INSP
1 MECH
HYD/PNE COMP
2 MECH.
COMP.
2 ELEC.
AIRFRAME &
1 A/C
ENGINE
REMOVE
4 A/C MECH.
ENGINE TO J.E.F.M. AREA

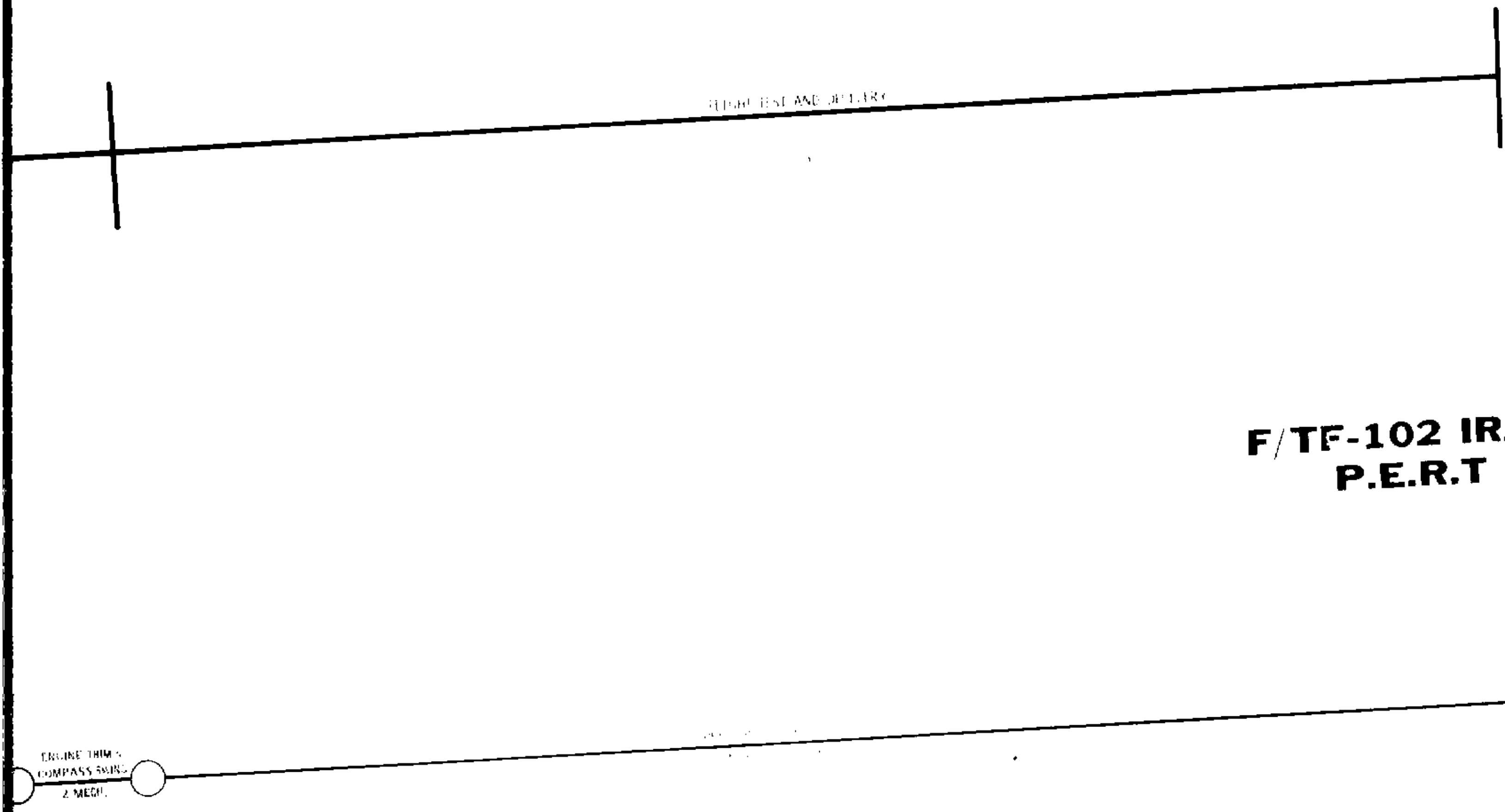

SHOP SUPPORT
INTERNAL
R INST
I CK.
EL)
C.
INC.
CH
ONENT INSP
ARM. BAY DOOR INSP.
2 MECH
(SUB ACTIVITY)
REINST
REMOVE INSP. & REPLACE L.G.
2 MECH


MODIFICATION AND IRAN
FLIGHT CONT. SYS. FRICTION CK.
MECH
SUPPORT
1 MECH
REMOVE
NAV.
1 ELEC
1 ELEC
ARRESTING GEAR
1 MECH
2 MEC

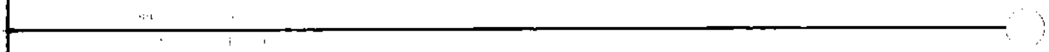

REMOVE
MACO
ELEC
MECH

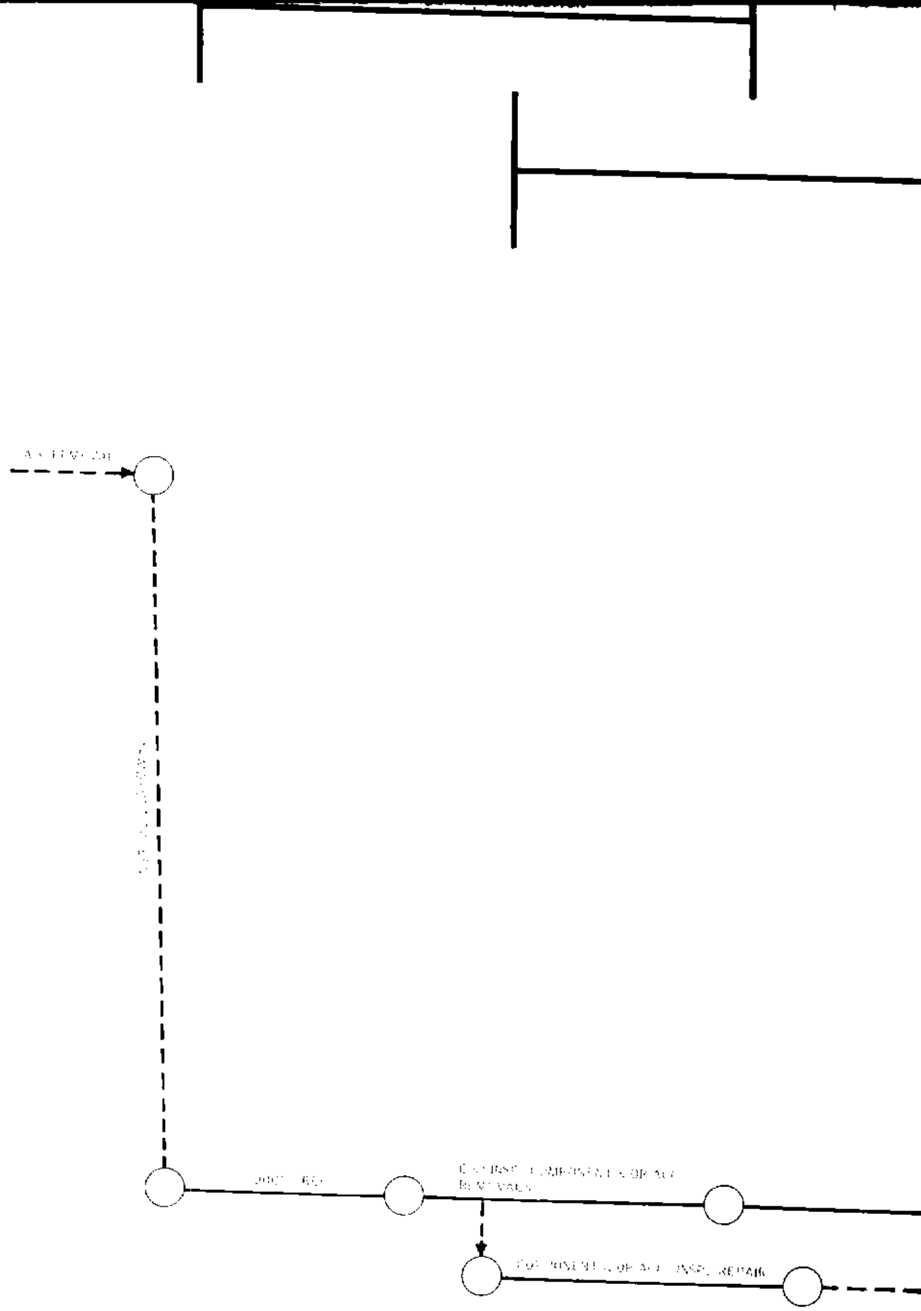

FINAL ASSEMBLY AND CHECKOUT
ENGINE TRIM &
COMPASS SWING
2 MECH.
REINSTL ENGINE
4 MECH
FROM ENGINE J.E.F.M. AREA

F/TF-102 IR
P.E.R.T

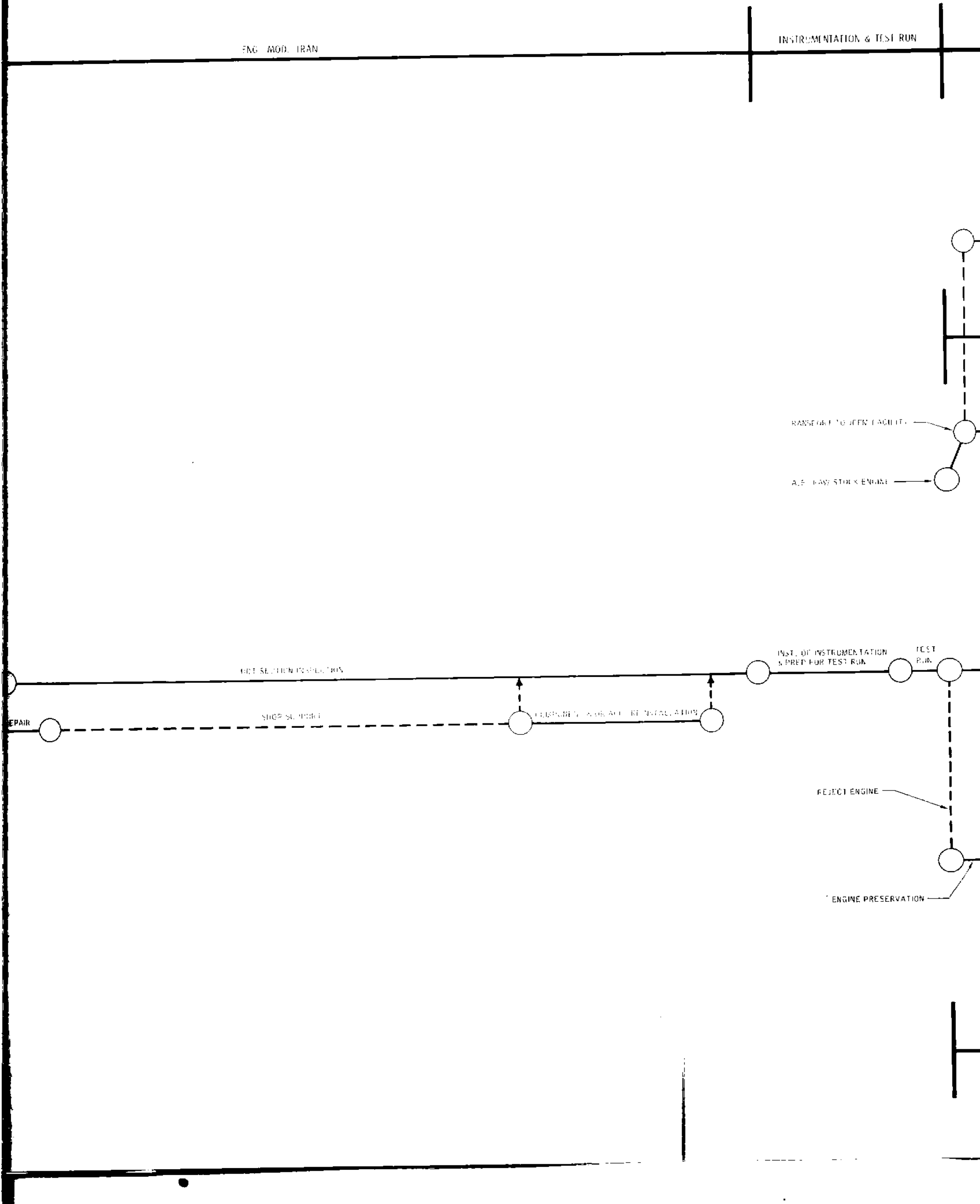


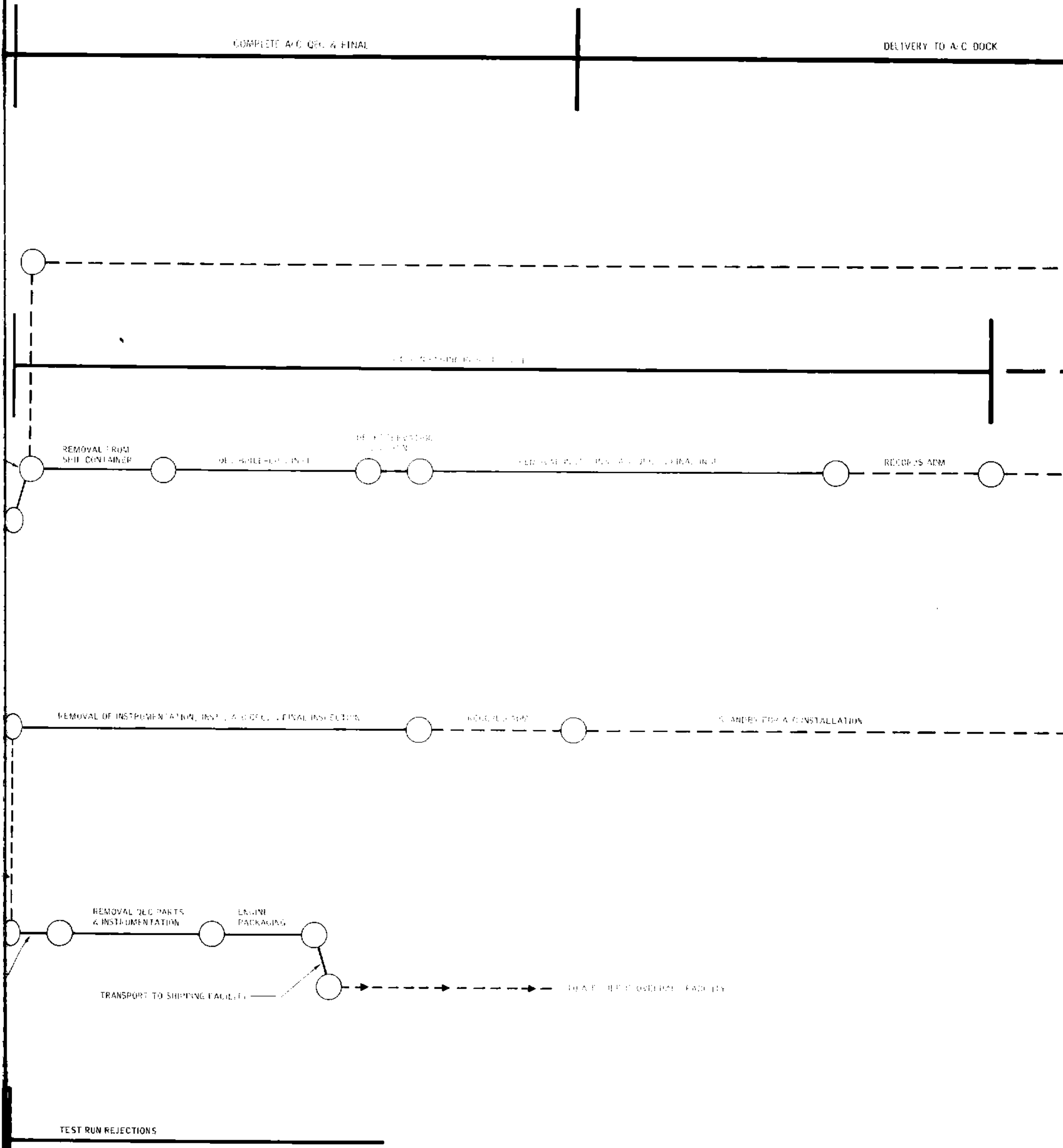
F/TF-102 IRAN PROGRAM
P.E.R.T NETWORK



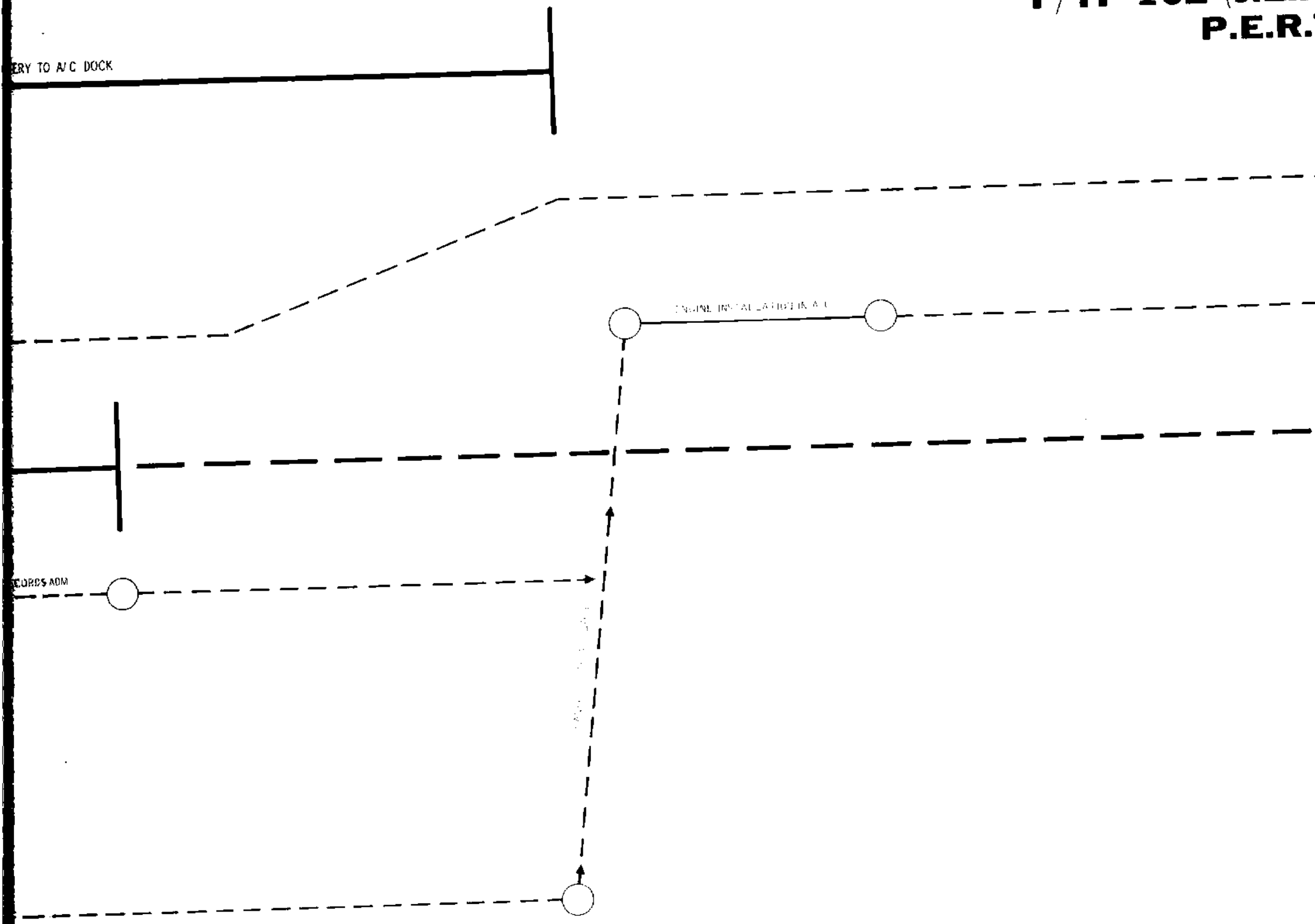


COMPONENTS OF A/C INSP./REPAIR

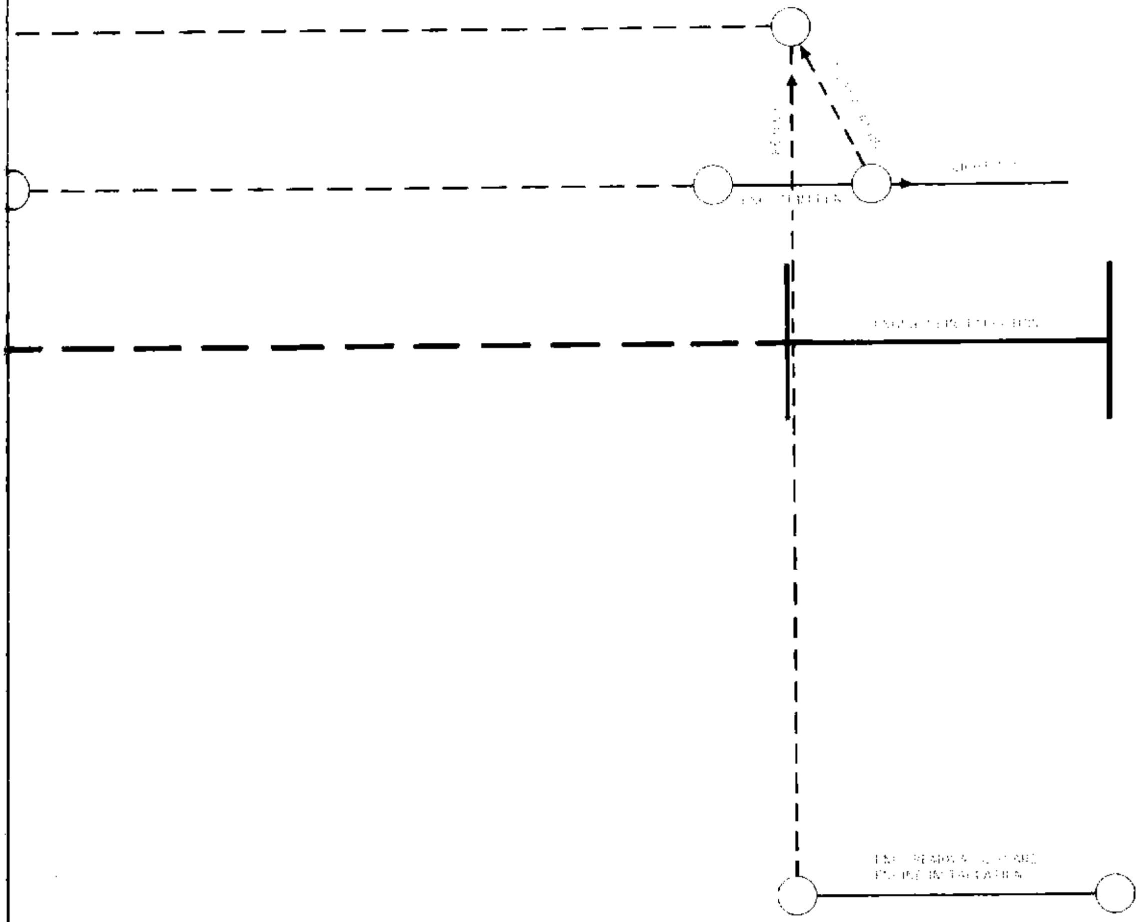

ENG MOD TRAN
INSTRUMENTATION & TEST RUN
RANSFER TO OEM FACILITY
A/S RAW STOCK ENGINE
HOT SECTION INSPECTION
EPAIR
SHOP SUPPORT
COMPONENT ASSY & RE-INSTALLATION
INST. OF INSTRUMENTATION & PREP FOR TEST RUN
TEST RUN
REJECT ENGINE
ENGINE PRESERVATION


COMPLETE A/C QEC & FINAL
DELIVERY TO A/C DOCK
REMOVAL FROM
SHIP CONTAINER
QEC BUILD-UP
RECORDS ADM
REMOVAL OF INSTRUMENTATION, INSP. & QEC FINAL INSPECTION
RECORDS ADM
STANDBY FOR A/C INSTALLATION
REMOVAL QEC PARTS
& INSTRUMENTATION
ENGINE
PACKAGING
TRANSPORT TO SHIPPING FACILITY
TO A/C OVERHAUL FACILITY
TEST RUN REJECTIONS

F/TF-102 (J.E.F
P.E.R.



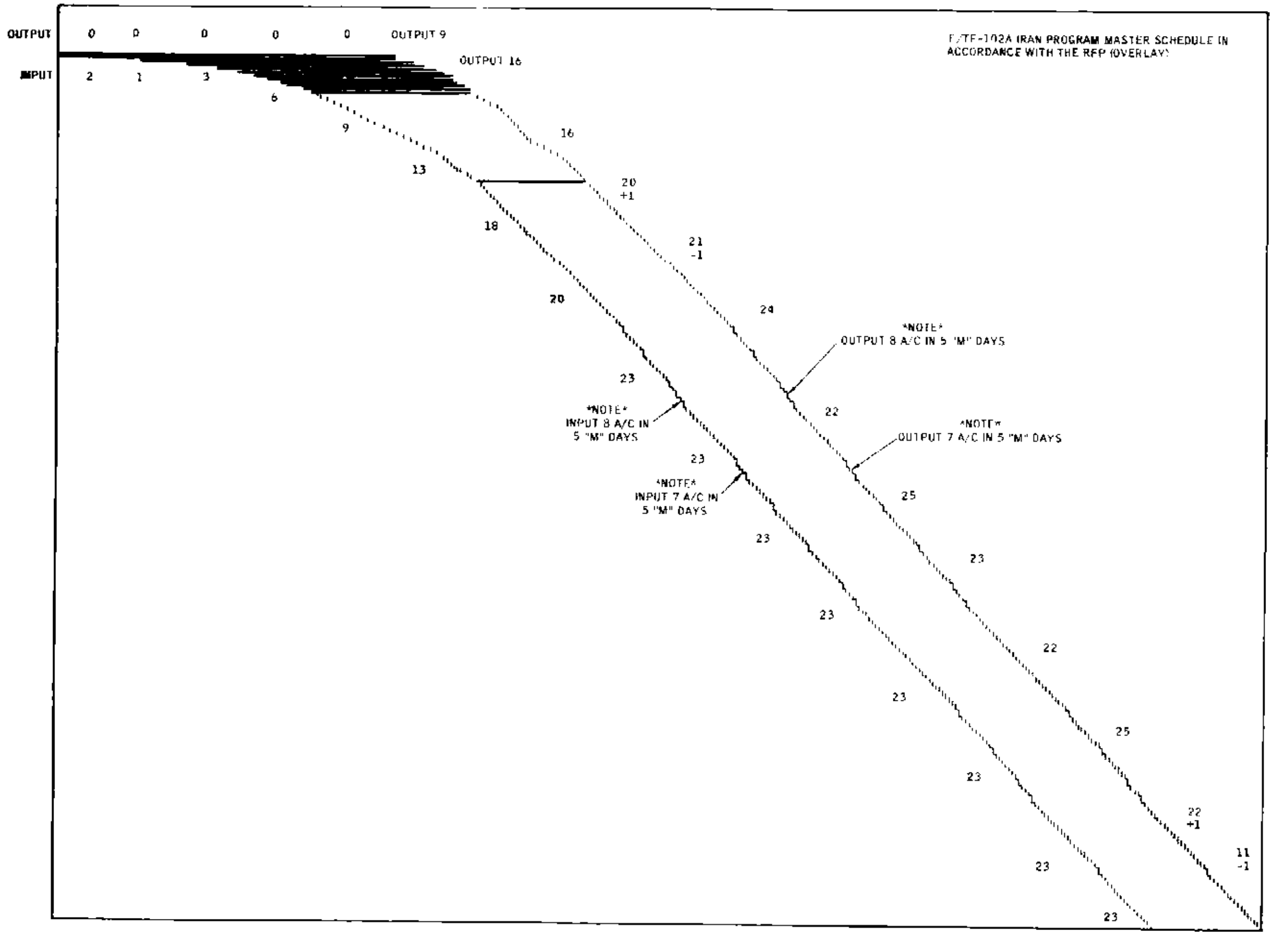
F/TF-102 (J.E.F.M.) IRAN PROGRAM
P.E.R.T NETWORK



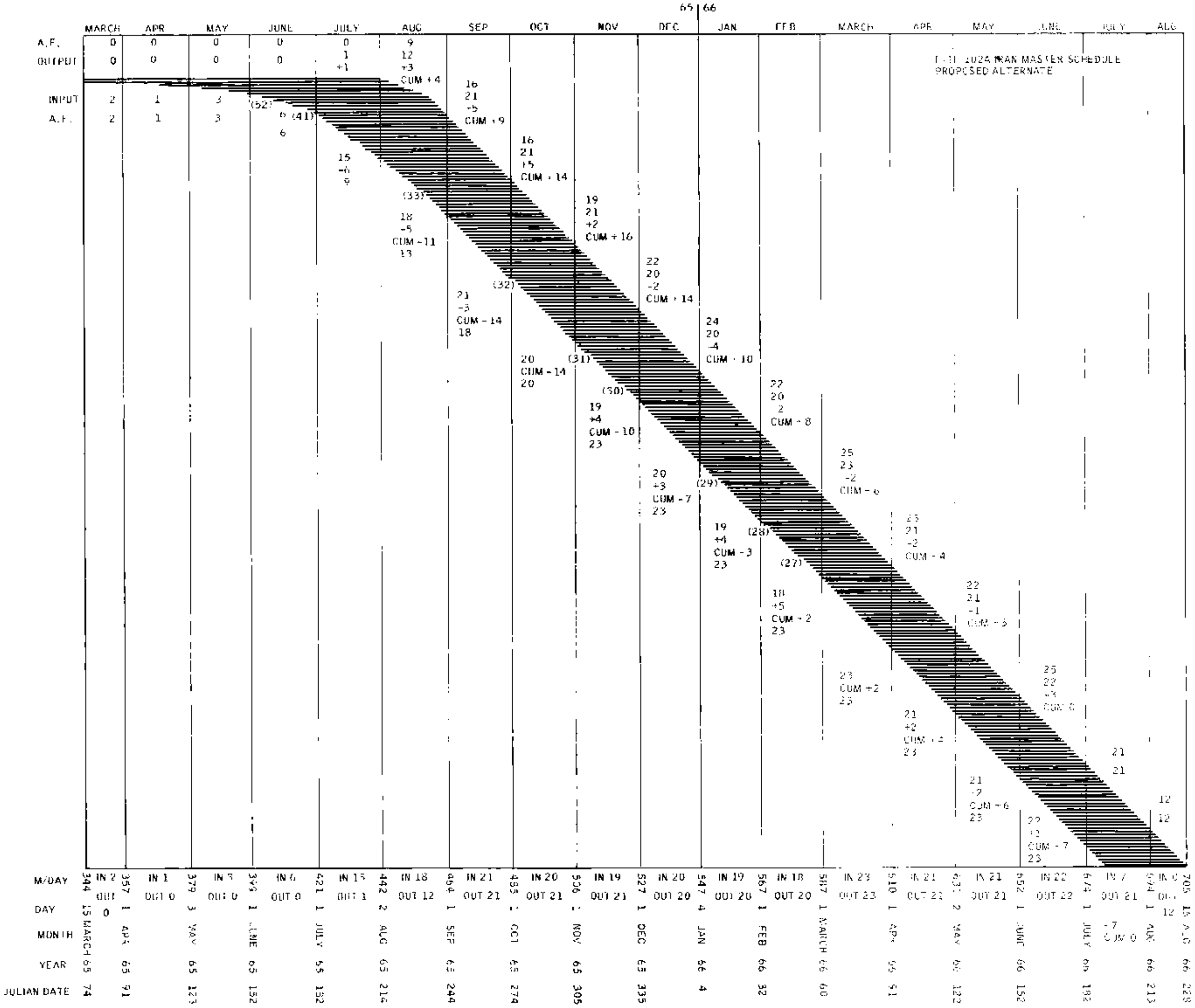
MASTER SCHEDULE

The program schedule used for developing the costs in response to items 1, 1a, 2, 2a is based directly on the input/output schedule as given in the RFP. Careful detailed analysis of the task as stated in the RFP, and the work in progress at Brookley AFB, indicates a substantial saving can be gained through alteration of input/output schedules and reduction of aircraft flow time.

Through practical production scheduling techniques to permit maximum manpower use, the minimum aircraft flow time can be progressively reduced to 27 workdays. However, to achieve this minimum flow time it is necessary to revise the aircraft input schedules for the months of July through September of 1965. Early input during these months permits reduction in work crew assignments thereby realizing a 19,520 man/hour reduction in the total program. These early inputs would be returned to the active inventory by the end of October 1965. The relationship of the schedule as given in the RFP to the alternate schedule is shown on the chart/overlay combination on the following page.



F/TF-102A IRAN PROGRAM MASTER SCHEDULE IN ACCORDANCE WITH THE RFP (OVERLAY)


F-111 1024 IRAN MASTER SCHEDULE
PROPOSED ALTERNATE
65 | 66
MARCH
APR
MAY
JUNE
JULY
AUG
SEP
OCT
NOV
DEC
JAN
FEB
MARCH
APR
MAY
JUNE
JULY
AUG
A.F. OUTPUT
INPUT A.F.
0
0
0
0
0
0
0
0
0
1
+1
9
12
+3
CUM + 4
2
2
1
1
3
3
(52)
6 (41)
6
15
-6
9
16
21
-5
CUM + 9
(33)
18
-5
CUM - 11
13
16
21
+5
CUM + 14
(32)
21
-3
CUM - 14
18
19
21
+2
CUM + 16
(31)
20
CUM - 14
20
22
20
-2
CUM + 14
(30)
19
+4
CUM - 10
23
24
20
-4
CUM - 10
(29)
20
+3
CUM - 7
23
22
20
2
CUM - 8
(28)
19
+4
CUM - 3
23
(27)
18
+5
CUM + 2
23
25
23
-2
CUM - 6
23
CUM + 2
23
23
21
-2
CUM - 4
21
+2
CUM + 4
23
22
21
-1
CUM - 3
21
+2
CUM + 6
23
25
22
+3
CUM 6
22
+1
CUM - 7
23
21
21
12
12
M/DAY
DAY
MONTH
YEAR
JULIAN DATE
344 15 MARCH 65 74
IN 2 OUT 0
357 1 APR 65 91
IN 1 OUT 0
379 3 MAY 65 123
IN 3 OUT 0
399 1 JUNE 65 152
IN 6 OUT 0
421 1 JULY 65 182
IN 15 OUT 1
442 2 AUG 65 214
IN 18 OUT 12
464 1 SEP 65 244
IN 21 OUT 21
485 1 OCT 65 274
IN 20 OUT 21
506 1 NOV 65 305
IN 19 OUT 21
527 1 DEC 65 335
IN 20 OUT 20
547 4 JAN 66 4
IN 19 OUT 20
567 1 FEB 66 32
IN 18 OUT 20
587 1 MARCH 66 60
IN 23 OUT 23
610 1 APR 66 91
IN 21 OUT 22
631 2 MAY 66 122
IN 21 OUT 21
652 1 JUNE 66 152
IN 22 OUT 22
674 1 JULY 66 182
IN 7 OUT 21
-7
CUM 0
694 1 AUG 66 213
IN 0 OUT 12
705 15 AUG 66 228

FACILITIES

The F/TF-102A IRAN program will be conducted in facilities located at San Diego International Airport, San Diego, California. The facilities are provided by Convair; use of government facilities is limited to sound suppressor (Hush House "A") located adjacent to San Diego International Airport.

San Diego International Airport, with an 8,700-ft. runway (8,100 ft. for landing on Runway 27) has FAA navigation and traffic control systems. However, only the localizer portion of the ILS is now available. By 1 April 1965, the FAA intends to have in operation a glidepath system to complete the ILS.

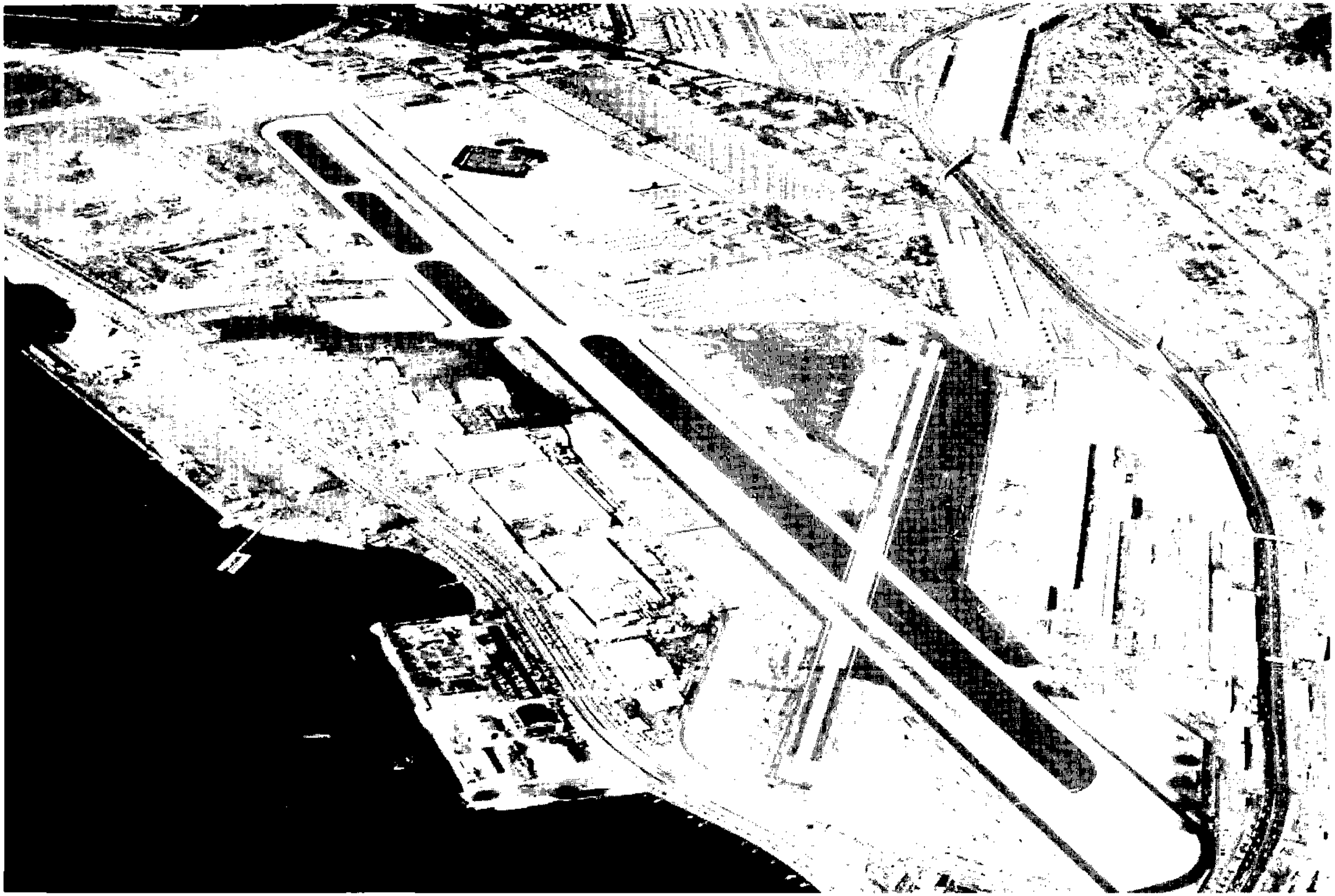
Firefighting and crash equipment is provided by the airport for commercial airline operation.

Convair facilities for the program include adequate covered work space and storage facilities in excess of 100,000 sq. ft. Interior clear height of work areas is 35 ft. Aircraft washing and painting facilities; electrical and pneumatic services for aircraft maintenance overhaul and operation, and backup shops, machine tools, and equipment for radio, electrical, and instrument repair, and machining operations and plant maintenance are available.

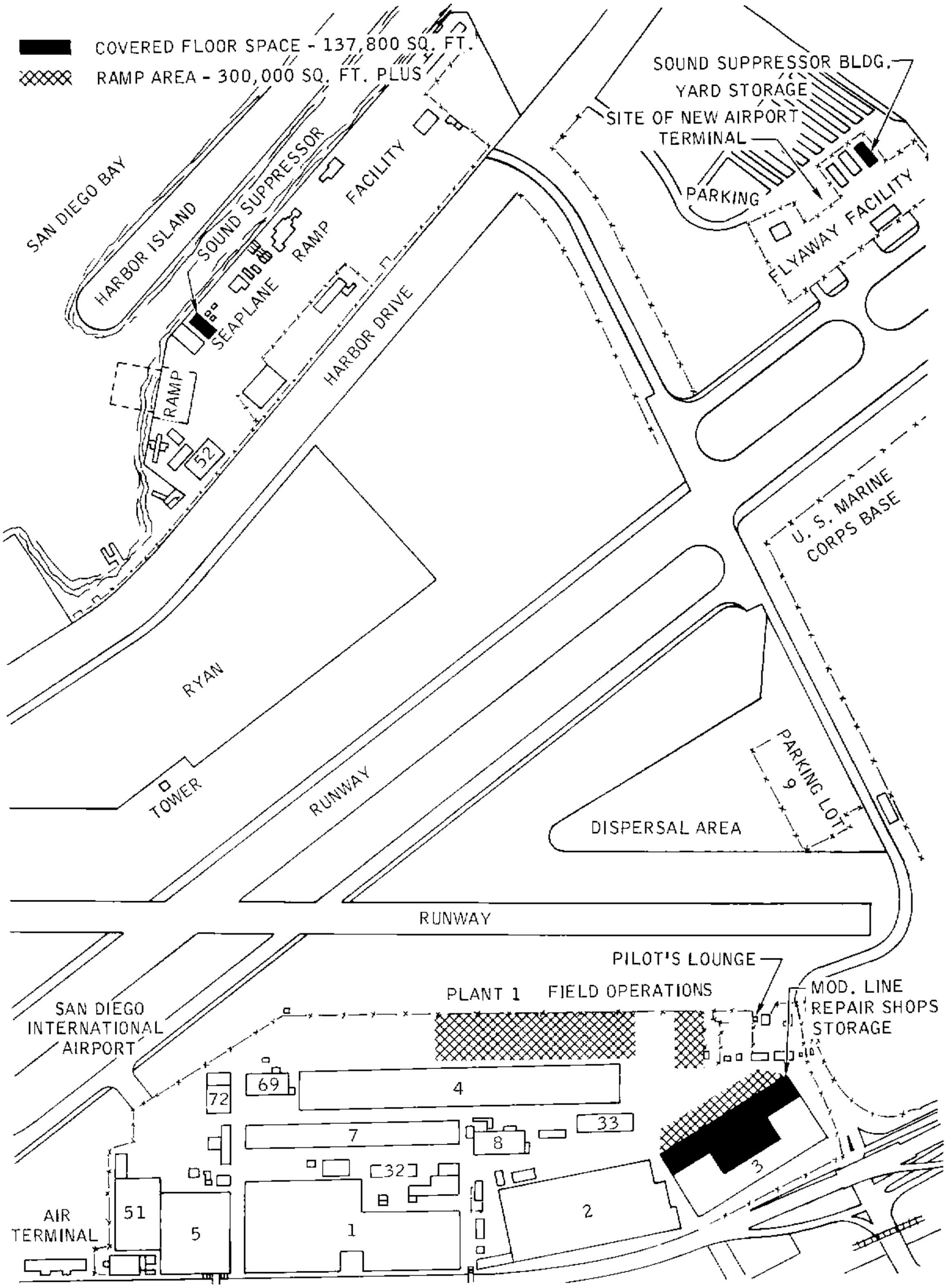
Adequate paved ramp areas are available for field operations. Aircraft fueling and defueling facilities are provided by Lockheed Air Services. A J-57 engine test stand facility is provided by Convair. Immediately upon contract award, Convair will clear the necessary buildings, install the engine test stand, and provide two work stations for the first aircraft arrival. Additional revisions will be made as the program accelerates.

Security control and clearance will be provided as required.

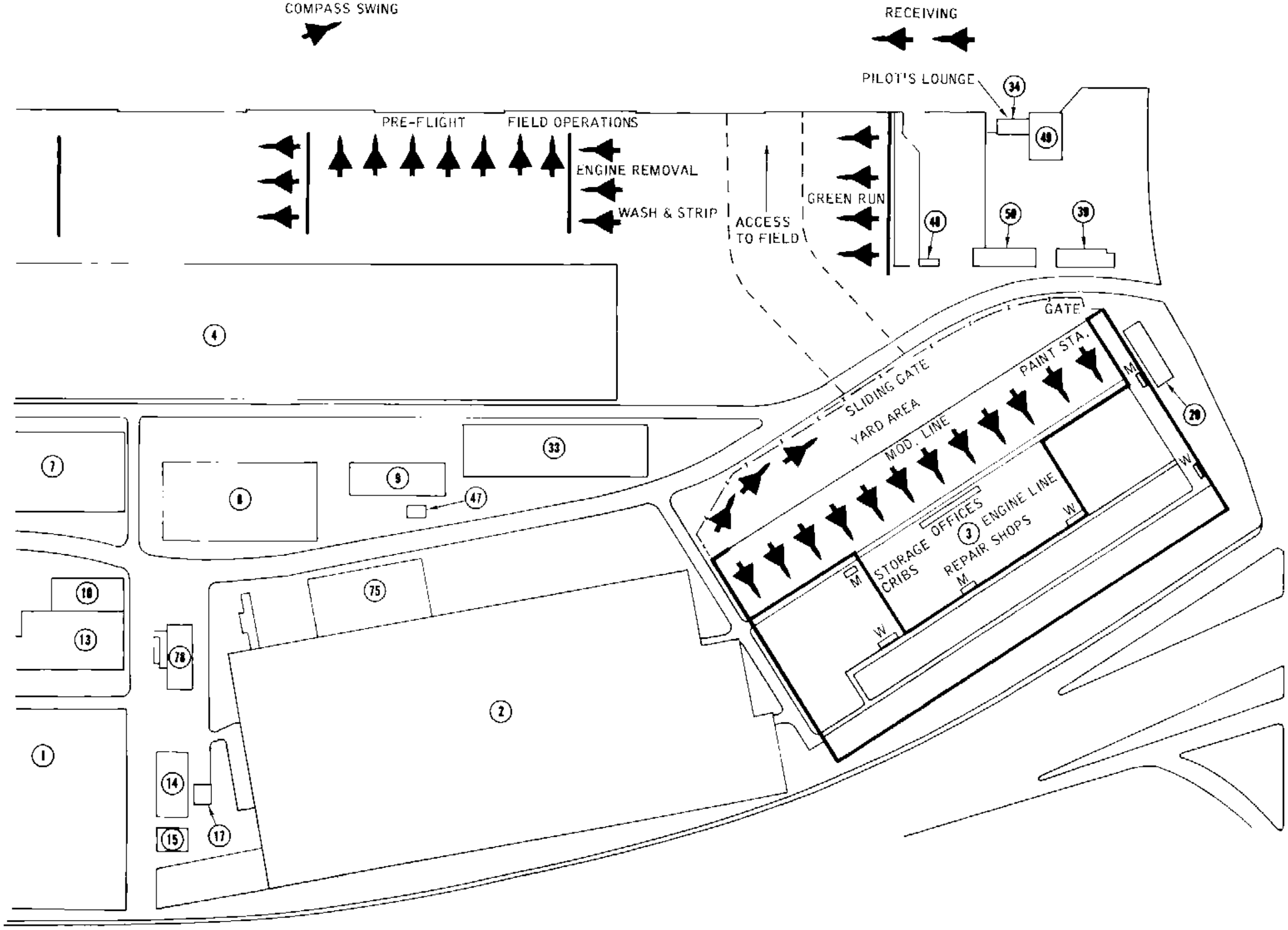
Complete functional flight tests of the F-102A can be performed in the San Diego area supersonic test corridor (Pacific Coast Range) with alternate tests at the Mojave Range.



Aerial View of Convair and San Diego International Airport



San Diego Site Plan, F/FT-102A IRAN Plant Facilities



Convair Plant 1 Facility

ORGANIZATION AND KEY PERSONNEL

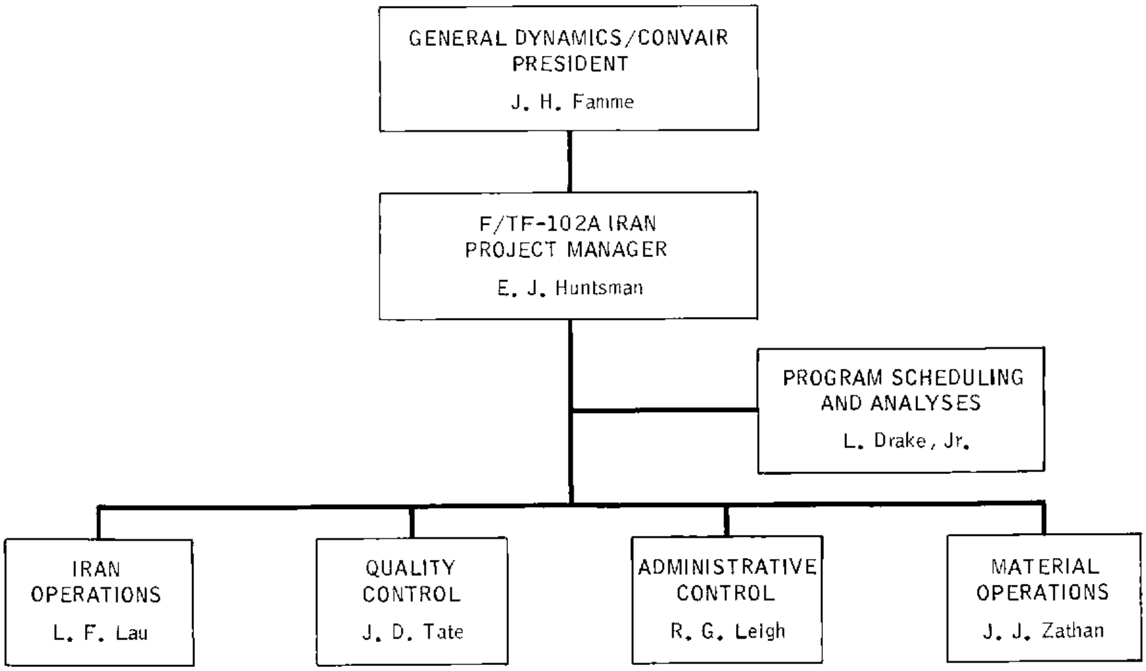
CONVAIR

Convair, a division of General Dynamics Corporation, is fully supported by all corporation resources. The F/TF-102A IRAN project manager will report directly to the Convair president to assure top management direction.

The president of Convair has in turn assigned to the IRAN project manager complete responsibility to direct the employment of all required resources. He is the focal point for performance coordination and control of the complete program. The IRAN project manager receives authority from two sources: from the Convair president the authority to ensure accomplishment of all program tasks; and from SAAMA and the ACO direction and authority to accomplish contractual tasks.

F/TF-102A IRAN MODIFICATION ORGANIZATION

The F/TF-102A IRAN program will be managed by a modification organization reporting directly to the IRAN project manager. Mr. E. J. Huntsman, F/TF-102A IRAN project manager, will devote full time to the program, and will establish the necessary coordination and controls to ensure scheduled completion of work in accordance with contractual commitments and cost targets. The project manager will be supported by a management team shown in the accompanying figure.



F/TF-102A IRAN Organization

KEY PERSONNEL

Professional résumés of managerial personnel assigned to the F/TF-102A IRAN program follow. As the résumés indicate, management personnel assigned to the program have extensive experience in F-102/F-106 aircraft modification or support programs.

E. J. HUNTSMAN — IRAN Project Manager

Education:

Industrial Management — California Western University; various General Dynamics courses in management

General Dynamics Experience:

Since early 1963, Mr. Huntsman as manager of activation and support for the General Dynamics/Astronautics Atlas Update Program has been responsible for the division effort in incorporating and proofing changes to the "E", "F" and OSTF-2 Atlas bases. He managed and directed the efforts of site modification teams at all "E" and "F" Atlas bases and the Support Operations organization in San Diego. This overall task involved 2,500 Astronautics personnel, numerous associate and subcontractor firms and various Air Force commands. At completion, the program involved more than 500 changes at a total cost of $56 million and was completed ahead of schedule and at a budget under-run of $16 million.

During 1961-1963, Mr. Huntsman acted as manager of base activation for the Atlas "D", "E" and "F" series missiles. In this capacity, he was responsible for management of the Astronautics program of building a nationwide series of Atlas missile system sites for the Air Force. This program involved some 8,000 field personnel, a number of major construction firms and a much larger number of technical and support subcontractors. The $400 million program included a production effort that coincided with an R&D phase, all conducted within a customer-directed compressed delivery schedule.

Before transferring to Astronautics, Mr. Huntsman participated in all phases of the Convair F-102 and F-106 programs. As foreman and general foreman of field operations, he activated the Field Operations

Department that performed field checkout and first flight tests. Promoted to general foreman in 1956, he was department head of Field Operations, responsible for preparing aircraft for delivery to the operational flight test activity. This assignment included processing some sixty aircraft per month during peak production periods. Earlier, Mr. Huntsman was in charge of final station assembly line production involving operations, hydraulic and pneumatic systems, flight controls, interior trim and final acceptance by the Air Force. During this time, he was responsible for the first F-102 production model through factory and initial test flight. Ultimately, Mr. Huntsman supervised all final assembly and acceptance of the initial F-102 production run.

L. F. LAU — Chief of Operations

Education:

Various General Dynamics courses in management
U.S. Navy Electronics School

General Dynamics Experience:

June 1960 to Present — At various times Mr. Lau has been responsible for the administrative and operational coordination between six Atlas Series "F" Bases and the San Diego on-site supporting functions. He supervised a staff of five Program Analysts, monitored off-site base activities, developed operational and administrative procedures, scheduling and cost analysis.

He has been responsible for production and manloading analysis of the manufacturing departments where he developed, implemented and maintained manloading and job performance charts for the Chief of Material Operations.

As the Project Manager of Operation Cleansweep, he was responsible for for the planning, scheduling, programming and incorporation of update modification tasks at six Atlas "F" Squadrons.

He was responsible for directing activation and testing of insalled Airborne Ground Equipment, facility equipment, and missile systems at twelve Atlas "F" complexes.

As Project Coordinator, Series "D" and "E" Bases he was responsible for performing analysis, follow-up and resolutions to operational problems encountered during the activation of missile sites at Cheyenne, Wyoming; Spokane, Washington; and Topeka, Kansas.

Mr. Lau has planned and programmed the manpower required to activate the Atlas "E" squadrons.

Mr. Lau set up the initial operation of the Problem Action Log System. This system provided documented technical and operational assistance to the Series "D" and "E" Base Operations during the activation phase.

In his early association with Convair Mr. Lau was responsible for the direction of personnel in the conduct of systems testing and initial hot firings of the Atlas missile at Sites 1 and 2, Sycamore Canyon.

JAMES D. TATE — Chief of Quality Control

Education:

Aeronautical Engineering, John Tarleton College, Stephenville, Texas
Various Technical and Managerial Courses at General Dynamics

General Dynamics Experience:

February 1964 to February 1965 — Supervisor of Reliability Control Administration. Responsible for all administrative functions including work instructions, personnel placement, quality audits, facilities and support for entire reliability control department.

January 1963 to February 1964 — Quality Assurance Supervisor on Centaur project for Astronautics. Responsible for quality control, engineering activity concerned with corrective action of field problems and resolving manufacturing problems which affected quality control.

1961-1963 — Chief of Quality Control. Responsible for the organization and management of all Inspection and Quality Control functions at Dyess Air Force Base, Texas, during the activation of Atlas missile sites. Includes Shipping and Receiving Inspection, Records Section, fabrication shop, cryogenics testing laboratory, cleaning facility, calibration laboratory, missile assembly building, and tooling inspection.

1959-1961 — Chief of Inspection - Inspection General Supervisor. Responsible for all Inspection and Quality Control functions during production flight test of F-102 and F-106 aircraft at the Palmdale, California, facility. Included the installation and test of automatic flight control systems, radar, fire control systems, and other electronic equipment. Prepared aircraft for flight and approved flight releases. Managed supporting functions such as Receiving and Shipping Inspection, Records Section, electronics laboratory, maintenance shops, bailed aircraft support and post acceptance area. Conducted flight de-briefings, evaluated discrepancies and assigned corrective action.

R. G. LEIGH — Chief of Administrative Control

Education:

San Antonio College, San Antonio, Texas
United States Army
    Command and General Staff School
    Procurement and Management School

General Dynamics Experience:

1961 to Present — Supervisor, Planning and Estimating Base Activation and Supervisor, Atlas Weapons System Estimating.

Prior Work Experience:

United States Army

1952-1960 — Comptroller
1940-1952 — Logistics

Significant Assignments

- Chief, Supply Division, Fifth U.S. Army
- Chief, Program Review and Analysis, U.S. Army Europe
- Program Coordination, Fourth U.S. Army
- Logistic and Comptroller Advisor, Saudi Arabian Ministry of Defense and Aviation
- Comptroller, Fort McArthur

J. J. ZATHAN — Program Administrator

Education:

Business Administration — San Diego State College,
University of California

General Dynamics Experience:

Mr. Zathan is Material Department project coordinator at General Dynamics/Astronautics responsible for analysis of specific Centaur Program material requirements. Prior to this assignment, he served in various capacities (chief of operational services, chief of production control, chief of material services and chief of base clearance) during activation of Atlas operational sites at Walker, Fairchild, Plattsburg, Warren and Schilling Air Force Bases. In the course of these off-site assignments, he dealt with such activities as production control, material control, subcontractor administration, purchasing and planning.

During the Convair F-102A program, Mr. Zathan was successively GFE supervisor, material administrator and chief of material and manufacturing control at the Convair off-site facility at Edwards Air Force Base. There, he was responsible for material operations, facilities control, and for direction of the material, manufacturing control and purchasing functions.

LEE DRAKE, JR. — Program Coordinator

Education:

B.S., Industrial Management, San Diego State College
Aeronautical Engineering, Northrop Aero Institute

General Dynamics Experience:

1964 to Present — Program Analyst Astronautics Operations Control. Developed an integrated task and cost control system for production of missile and PERT networks for detailed fabrication, subassembly and final assembly for use at the line department level. Aided in implementating budget controls at the line department level and coordinated schedule and budget relationships for various missile programs.

1963-1964 — Program Analysts Astronautics division "E" and "F" Atlas update programs. Developed the detailed PERT network which became the basis for the program schedule, budget allocation and status reporting system; coordinated Engineering technical sequence and manpower estimates for the basic PERT network; coordinated the development of all recycle schedules for the program; and developed the Operations Control status reporting system. Developed administrative PERT networks for management. Aided in the reprogramming of all the above schedules and supporting equipment and served as an assistant to the manager for special projects.

1961-1963 — Master Scheduler, Astronautics Division Atlas "E" and "F" Operational Program. Developed basic administrative and operational PERT networks; developed installation and checkout schedules for the silos and missile field operations; trained field personnel in the use of the PERT network and the computer runs for management control purposes; and aided in implementing the status control system used in the program.

OPERATIONAL PERSONNEL AND MANLOADING

Convair's plan for manning the F/TF-102A IRAN program is based on supplying the required management and technical manpower from personnel currently employed by Convair in San Diego — men highly experienced in the design and operational characteristics of the F-102A airplane.

Convair can readily support the manpower requirements of the F/TF-102A IRAN modification program with personnel now on the payroll, and from the 5,000 experienced aircraft workers on layoff status that are available for immediate recall. The buildup required for subsequent follow-on contracts can be supplemented by recruiting from the experienced San Diego area aircraft labor pool at the local wage level. A large majority are highly skilled technical personnel with an average of 17 years' experience in aerospace vehicle fabrication and assembly.

In addition, a large number of technicians employed by General Dynamics/ Astronautics is available for selective transfer to the IRAN program, if required. San Diego is now classified as a Class D unemployment area by State and Federal agencies (25,300 or 7.4% of labor force unemployed) with substantial losses in employment in the aircraft and missile industry forecast for first half 1965.

The time-phased program direct manpower estimate is summarized in the tabulation on the following page.

Function Classification	15 March 14 April	15 April 14 May	15 May 14 June	15 June 14 July	15 July 14 August	15 August 31 August	1 September 31 December	Total Man Days 1965	1 January 22 July	25 July 29 July	1 August 5 August	8 August 12 August	15 August 19 August	Total Man Days 1966	Grand Total
M. Days	23	22	20	21	32	13	85		142	5	5	5	5		365
Operations															
Aircraft Teardown															
Leadman	1	1	1	1	1	1	1		1	1	-	-	-		
Iran-Mech	2	4	4	4	4	4	4		4	2	-		-		
Assembler A Mech	2	4	4	4	4	4	4		4	1	-	-	-		
S & I Crew															
Leadman	1	2	3	4	5	5	5		5	4	3	2	1		
Checkout Mech	-	1	3	5	6	7	9		9	7	5	3	1		
Checkout Elect	-	1	2	5	6	7	9		9	8	5	3	1		
Assembler A Mech		1	2	5	6	7	9		9	8	5	3	1		
Assembler B Mech	2	3	5	7	12	14	19		18	16	12	7	2		
Assembler A Elect	1	1	2	5	6	7	9		9	7	5	3	1		
Assembler B Elect	2	3	5	7	12	14	13		18	15	12	8	2		
Assembler A E & R	1	2	3	7	11	14	18		18	16	11	8	1		
Skin & Structure Crew															
Assembler Sub Assy A	1	2	2	2	2	2	2		2	2	1	1	1		
Assembler Sub Assy B	1	2	1	4	4	4	4		4	4	2	2	2		
Maint & Paint															
Maint Mech A	1	1	1	1	1	1	1		1	1	1	1	1		
Maint Mech B	1	1	1	1	1	1	1		1	1	1	1	1		
Maint Elect A	1	1	1	1	1	1	1		1	1	1	1	1		
Painters	1	1	1	2	3	3	3		3	2	2	1	1		
General Helpers	3	3	3	4	5	6	6		6	2	2	1	1		
JEFM Crew															
Leadman	1	1	1	1	1	1	1		1	1	1	1	1		
IRAN-Mech	1	1	2	4	7	10	12		12	10	7	6	3		
Assembler - Pwr Plant A	1	1	2	2	2	2	2		2	2	2	1	1		
Assembler - Pwr Plant B	1	1	2	4	4	4	4		4	3	3	2	1		
Field & Service Mech A		1	2	3	3	3	3		3	2	2	1	1		
Aircraft Checkout															
Field Service Mech A	-	2	2	3	6	7	9		9	7	6	4	1		
Field Service Mech B	-	1	2	5	6	7	8		8	6	5	4	1		
Field Service Mech A Elect	-	1	3	3	3	3	3		5	3	2	1	1		
Field Service Mech B Elect	-	1	2	5	6	7	8		8	7	6	5	2		
Electronic Flt. Syst. Tech A	-	1	1	2	1	5	5		5	1	3	2	1		
Flight Crew															
Leadman	-	-		1	1	1	1		1	1	1	1	1		
Field Service Mech A	-	-		4	8	12	14		14	14	12	10	10		
Field Service Mech A Elect			1	2	4	6	8		-	7	6	5	5		
Total Operations	25	45	79	110	145	171	205	27,263	202	168	125	97	47	30,804	58,067
Quality Control*															
QC Engineer	1	1	1	1	1	1	1		1	1	1	1	1		
Leadman		1	2	3	3	4	4		4	3	3	1	1		
Insp Assembly A	2	2	3	4	6	7	10		10	6	4	3	2		
Insp Assembly B	1	2	2	5	4	5	8		8	6	4	2	1		
Insp Magnetic A	1	1	1	1	2	2	2		2	1	-	1			
Aircraft Checker		1	1	1	1	1	1		1	1					
Metallurgical Anal		1	1	1	1	1	1		1	1	1	1	1		
Insp Electronic A		1	1	1	1	1	1		1	1	1				
Insp Matl Rev. A			1	1	1	1	1		1	1	1	1	1		
Insp Hydraulic A	1	1	2	2	2	2	2		2	2	1	1	1		
Insp Hydraulic B	2	2	4	4	4	4	1		4	2	2	1			
Insp Elec Equip A	1	1	1	1	1	1	1		1	1	1	1	1		
Insp Elec Equip B		1	2	3	3	3	3		3	1	1				
Insp Instru. B	1	3	2	2	2	2	2		2	1	1	1	1		
Insp F & S Elec A			1	1	1	1	1		1	1	1	1	1		
Insp F & S A			1	5	4	5	8		8	8	8	5	3		
Delivery Anal		1	1	1	1	1	1		1	1	1		1		
Insp Rec. Elec A	1	1	-	1	1	1	1		1	1	1	1			
Total Quality Control	11	15	28	33	39	43	52	7,614	58	38	31	22	15	7,911	15,526
Material Operations															
Crater Packer	1	1	1	1	1	2	2		2	2	2	2	2		
Planners	1	1	1	2	2	3	3		3	2	1	1	1		
Dispatchers	1	2	2	3	4	5	7		7	5	3	2	1		
Total Material Operations	3	4	4	6	7	10	12	1,653	12	9	6	5	4	1,824	3,457
Scheduling and Reporting															
Program Coordinator	1	1	1	1	1	1	1		1	1	1	1	1		
Master Scheduler	-	-	-	1	1	1	1		1	1	-	-	-		
Master Sched Analyst	1		1	1	1	1	1		1	1	1		-		
Scheduler						2	2		2						
Total Scheduling & Reporting	2	2	2	3	3	5	6	734	5	3	2	2	1	750	1,484
Grand Total	41	70	108	152	194	229	271	37,244	271	215	164	116	67	41,282	78,526

*Note. Quality Control includes 14 personnel to conduct bench testing of hydraulic, pneumatic and electrical equipment and instruments.

TECHNICAL SUPPORT CAPABILITIES AND BACKGROUND

The support of F/TF-102A aircraft now in service, has created a readily available nucleus of experienced engineering and service personnel qualified in all aspects of the F-102A program.

Currently, some 300 experienced engineers have worked on and are familiar with the F-102A aircraft. In addition, 52 experienced engineers are working under the present SAAMA Engineering Services Support contract; the service engineering activity both on-site and in the field employs another 35 persons.

This engineering capability and experience — spanning the history of the F-102A weapon system from original design through production to the current field support — is available for engineering support on the F/TF-102A IRAN program as required.

VALUE ENGINEERING

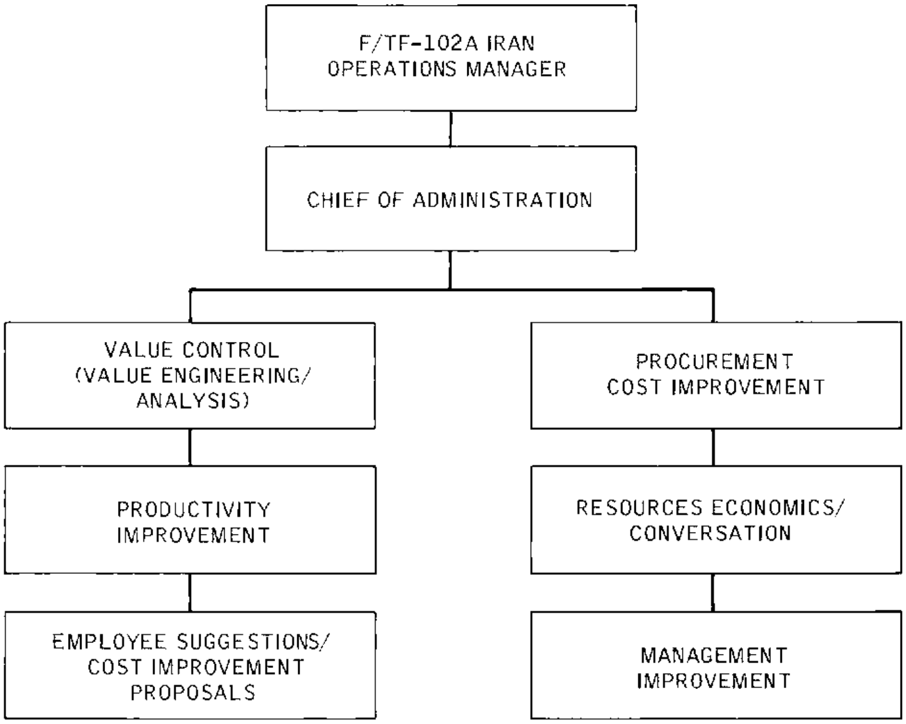
Value engineering and analysis techniques include: (1) specification reviews to ensure that requirements are realistic for the end use, (2) design reviews that incorporate procedures that challenge design concepts objectively for value and function, and (3) value-oriented producibility studies of all hardware to guarantee maximum value.

The IRAN value control effort covers all phases of contracted programs from inception to termination. Overall responsibility for program direction lies with the IRAN chief of administration, who reports directly to the IRAN operations manager. Value Control responsibilities include establishing plans, policies and procedures for applying value engineering techniques and administering training programs.

The IRAN chief of administration is supported by representatives of all departments, who are responsible for implementing effective value control activities within the individual departments, see following chart.

During the F-102A IRAN program, an effective value engineering program will be established and conducted in accordance with Defense Procurement Circular No. 11. This effort will include:

Key decision making personnel will receive a special indoctrination course to instruct them in applying effective value engineering techniques to an IRAN program.


F/TF-102A IRAN OPERATIONS MANAGER
CHIEF OF ADMINISTRATION
VALUE CONTROL (VALUE ENGINEERING/ ANALYSIS)
PROCUREMENT COST IMPROVEMENT
PRODUCTIVITY IMPROVEMENT
RESOURCES ECONOMICS/ CONVERSATION
EMPLOYEE SUGGESTIONS/ COST IMPROVEMENT PROPOSALS
MANAGEMENT IMPROVEMENT

TCTO's, service and maintenance technical orders and records, parts orders, specifications, and other documents related to the cost of service and maintenance will be reviewed to isolate areas where the overall cost of IRAN and follow-on service and maintenance can be reduced.

Throughout the IRAN program, the operations manager will be responsible for value improvement activities. Results of these cost reduction efforts will be reported in accordance with Air Force requirements.

F-102A CYCLE FATIGUE TEST PROGRAM

Convair is currently conducting an F-102A cycle fatigue test program designed to validate the aircraft to 8,000 flying hours — the equivalent of two simulated service lives. This test work is sponsored by SAAMA Contract AF 41(608)-27335.

During the course of the IRAN program, data generated by cycle fatigue testing could prove invaluable in pointing out unforeseen problem areas.

Corrections indicated by the tests could be added to the proposed modification/IRAN program, thereby assuring their earliest possible incorporation on greater numbers of aircraft by eliminating the delays implicit in making the desired changes through the TCTO and kit process.

CORROSION CONTROL

Corrosion control techniques and practices applied to Convair products have evolved from design and production experience with aircraft ranging from seaplanes and commercial transports to supersonic interceptor aircraft. Service records on operational Convair aircraft indicate a negligible incidence of stress corrosion cracking — indicating a thorough Convair knowledge and understanding of corrosion protective measures and their application to aircraft structures.

One example of a corrosion control technique developed by Convair is the Scotchweld bonding system used in the F-102 (and subsequent F-106, 880 and 990 aircraft) to ensure minimum maintenance of the integral fuel tanks. When operational aircraft experienced corrosion damage to the Scotchwelded prime wing skins due to microbial contamination of jet fuel, Convair developed a repair system using the Air Force standard MIL-C-27725 protective coating. This preventive technique has been applied to the Scotchweld wing tanks of the 880/990 commercial jetliners, resulting in two years of maintenance-free service in the areas of the highest contamination of JP-class aviation fuels.

This Convair background in corrosion control is available to remedy any additional corrosion problems that may occur during the span of the F-102 IRAN program.

DATA CONTROL SYSTEM

Convair uses a data control system that meets the requirements of Air Force Logistics Command Manual 310-1A, revised 15 August 1964. This system includes a data control point as described by AFLCM 310-1, Volume I, Para. 3k, dated 15 March 1964. This data control point has responsibility for interpreting, scheduling, coordinating, and submitting all contract data. This system has been in use for two and one half years at Convair for other programs.

DD Forms 1423 submitted with this proposal include data requirement of RFP SA-5-97167. Certain items of data specified in the RFP appear to have been omitted inadvertently from the RFP DD Form 1423. Convair has added these items on a separate DD Form 1423 which is included in the proposal together with appropriate cost estimates.

For each data item added by Convair there is also an Air Force Form 9 Data Item sheet included in the proposal. Each of these sheets has been given an unapproved "U" designation. These items are preceded by the "U" designation on the added DD 1423 Form in accordance with 3e(3)(a) of Volume I, AFLCM 310-1.

An explanation of each change made to the DD Forms 1423 follows. The numbers correspond to those of the data items involved. The "U" designations on the DD 1423 received with the RFP have been removed from Items 83.1, 83.2, 83.3, 83.6 and 83.8 since these are approved Data Items appearing on approved Air Force Form 9 in Volume II of AFLCM 310-1. The "U" designation has been added to item 83.4 since this is a new item. The following added explanations are provided:

83.5 Aircraft/Missile Maintenance Production Compression Report — This report has been shown as a weekly report due each Thursday in accordance with Data Sheet L-20-63.0.

83.9 Material Inspection and Receiving Report — This item has been added since it is specifically required by Clause 44 of SAPM 71-18 of the General Provisions in RFP SA-5-97167. Preparation of this item is described on Form 9, designated U-1.

83.10 Certificate of Conformance — This item has been added since it is specifically required by Clause SAPM 71-81 of the General Provisions in RFP SA-5-97167. Preparation of this item is described on Form 9, designated U-2.

83.11 Value Engineering Cost Reduction Proposals — This item has been added since it is specifically required by Clause SAPM 71-76 of the General Provisions in RFP SA-5-97167. Preparation of this item is described on Form 9, designated U-3.

83.12 Flight Report and Maintenance Record — This item has been added since it is specifically required by Appendix A, Supplement No. 1 to RFP SA-5-97167. Preparation of this item is described on Form 9, designated U-4.

83.13 Aircraft Historical Records — This item has been added since it is specifically required by Appendix A, Supplement No. 1 to RFP SA-5-97167. Preparation of this item is described on Form 9, designated U-5.

83.14 Aircraft Inventory Record — This item has been added since it is specifically required by Appendix A, Supplement No. 1 to RFP SA-5-97167. Preparation of this item is described on Form 9, designated U-6.

83.15 Government-Furnished Property Requisition (DD-1348) — This item has been added since it is specifically required by Appendix B, Section 14 of RFP SA-5-97167. Preparation of this item is described on Form 9, designated U-7.

83.16 Work Books — This item has been added since it is specifically required by Appendix A, Section I-3, of RFP SA-5-97167. Preparation of this item is described on Form 9, designated U-8.

83.17 Flight Report — This item has been added since it is specifically required by Appendix A, Section II-4, of RFP SA-5-97167. Preparation of this item is described on Form 9, designated U-9.

83.18. Revised Handbook of Weight and Balance Data — This item has been added since it is specifically required by Appendix A, Section IIIa(2), of RFP SA-5-97167. Preparation of this item is described on Form 9, designated U-10.

STATEMENT OF ANALYSIS OF [illegible] COST
CONTRACT [illegible] 3316[illegible] 3117[illegible]
30 SEPTEMBER 1957

	SALES	COST OF SALES	PROFIT	% OF PROFIT TO SALES
BOOKED 1957	$10167305.45	$[illegible]651651.35	[illegible]	8.66
TO BE BOOKED TO END OF CONTRACT	[illegible]	[illegible]	[illegible]	8.66
TOTALS	[illegible]	[illegible]	[illegible]	

	SALES	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible] SEPTEMBER [illegible]	[illegible]	[illegible]	[illegible]	8.6[illegible]

[illegible]

10.94½

[illegible]

STATEMENT OF ANALYSIS OF CONTRACT COSTS
CONTRACT AF 33(600)-29264
31 DECEMBER 1956

	SALES	COST OF SALES	PROFIT	% OF PROFIT TO SALES
Booked: 31 December 1956	$ 85,442,796.00	$ 76,471,302.42	$ 8,971,493.58	10.50%
To be booked to end of contract	28,271,378.00	25,621,351.58	2,650,026.42	
Total	$113,714,174.00	$102,092,654.00	$11,621,520.00	10.22%
	Sales	Actual Costs	[illegible]	
Actual Costs	$ 85,442,796.00	$ 87,264,006.76	$(1,821,210.76)	
Estimated to Complete	28,271,378.00	14,828,647.24	13,442,730.76	
Total Indicated Costs per 11/30/56 Budget Report	$113,714,174.00	$102,092,654.00	$11,621,520.00	10.22%

Cost Accounting Department
Cost Audit Section
13 February 1957

STATEMENT OF ANALYSIS OF CONTRACT COSTS
CONTRACT AF 33(600)-29264
31 March 1957

	SALES	COST OF SALES	PROFIT	% OF PROFIT TO SALES
Booked:				
1956	$ 85,442,796.00	$ 76,471,302.42	$ 8,971,493.58	10.50%
1957	$ 681,700.32	$ 610,121.79	$ 71,578.53	10.50%
	$ 86,124,496.32	$ 77,081,424.21	$ 9,043,072.11	10.50%
To be booked to end of Contract	$ 27,571,208.68	$ 25,300,821.79	$ 2,270,386.89	
Total	$113,695,705.00	$102,382,246.00	$11,313,459.00	9.95%
	SALES	ACTUAL COSTS	DIFFERENCE	
Actual Costs	$ 86,124,496.32	$ 90,839,748.83	$(4,715,252.51)	
Estimated to Complete	$ 27,571,208.68	$ 11,542,497.17	$16,028,711.51	
Total Indicated Costs per 2/28/57 Budget Report	$113,695,705.00	$102,382,246.00	$11,313,459.00	9.95%

Cost Accounting Department
Works Accounting Section
23 April 1957

STATEMENT OF ANALYSIS OF CONTRACT COSTS
CONTRACT AF 33(600)-29264
31 March 1957

	SALES	COST OF SALES	PROFIT	% OF PROFIT TO SALES
Booked:				
1956	$ 85,442,796.00	$ 76,471,302.42	$ 8,971,493.58	10.50%
1957	$ 681,700.32	$ 610,121.79	$ 71,578.53	10.50%
	$ 86,124,496.32	$ 77,081,424.21	$ 9,043,072.11	10.50%
To be booked to end of Contract	$ 27,571,208.68	$ 25,300,821.79	$ 2,270,386.89	
Total	$113,695,705.00	$102,382,246.00	$11,313,459.00	9.95%
	SALES	ACTUAL COSTS	DIFFERENCE	
Actual Costs	$ 86,124,496.32	$ 90,839,748.83	$(4,715,252.51)	
Estimated to Complete	$ 27,571,208.68	$ 11,542,497.17	$16,028,711.51	
Total Indicated Costs per 2/28/57 Budget Report	$113,695,705.00	$102,382,246.00	$11,313,459.00	9.95%

Cost Accounting Department
Works Accounting Section
23 April 1957

STATEMENT OF ANALYSIS OF COSTS
CONTRACT AF33(600)-29264
31 MARCH 1957

	SALES	COST OF SALES	PROFIT	% OF PROFIT TO SALES
BOOKED				
1956	$85442 79600	$76471 30242	$8971493.58	10.50 %
1957	681 700.32	610121 79	7157853	10.50 %
	$86 124 496 32	$77081 42421	$904307211	10.50 %
TO BE BOOKED TO END OF CONTRACT	27,571,20868	25300 82179	227038689	
TOTAL	$113,695,705.00	$102,38224600	$11,313 457.00	9.95 %
ACTUAL COSTS	$86,124,496.32	$90839748 83	$<4715252 51>	
ESTIMATED TO COMPLETE	27571 20868	11 542 49717	16 028 711 51	
TOTAL INDICATED COSTS PER 2/28/57 BUDGET REPORT	$113 695 705.00	$102382 246 00	$11 313 459 00	9.95 %

DIVISION COSTS

STMT OF ACCUM COSTS
DIVISION COSTS.

COST ACCOUNTING DEPARTMENT
WORKS ACCOUNTING SECTION
23 APRIL 1957

THIS CALCULATION WAS USED

STATEMENT OF ANALYSIS OF CONTRACT COSTS
CONTRACT AF33(600)-29264
31 MARCH 1957

	SALES	COST OF SALES	PROFIT	% OF PROFIT TO SALES
BOOKED 31 MARCH 1957	# 86,124,496.32	# 77,081,424.21	$ 9,043,072.11	10.50%
TO BE BOOKED TO END OF CONTRACT	27,571,208 68	25,300,821 79	2,270,386 89	
	# 113,695,705 00	# 102,382,246.00	# 11,313,459 00	9.95%
ACTUAL COSTS	# 86124496 32	# 70,839748 83	# ⟨4,715,25251⟩	
ESTIMATED TO COMPLETE	27571 208 68	11,542497 17	16,028 711 51	
TOTAL INDICATED COSTS PER 2/28/57 BUDGET REPORT	# 113695705 00	# 102 382246 00	# 11 313459 00	9.95%

~~Bill —~~

THIS FIGURE OF 70,839,748.83 DOES NOT AGREE WITH THE TRIAL BALANCE FIGURE OF 3-31-57 OF 123,718.89. THE DIFFERENCE LIES IN VARIOUS INCORRECT WORK ORDERS NOT IN THE 167XX OR 168XX SERIES WHICH FRANCIS CONSIDERS AS AIRPLANE COSTS, BUT THAT I CONSIDER SPARES ON THE STATEMENT OF ACTUAL COSTS. ALSO I AM CARRYING THE 16900 W.O. AS M.T.U. UNTIL I TRANSFER THESE CHARGES TO 1689B

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-027
DATE 31 Sept 1955
MODEL F-102A

TITLE

REPORT NO. ZD-8-027
DOCUMENTATION FOR WAIVERS
FROM CONTRACTUAL REQUIREMENTS
FOR ACCEPTANCE OF
F-102A AIRPLANE AF S/N 53-1798
CONTRACT AF33(600)-5942

PREPARED BY ______________________

GROUP Project Specifications

REFERENCE ______________________

CHECKED BY ______________________

APPROVED BY ______________________

NO. OF PAGES ______________

NO. OF DIAGRAMS ______________

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

FORM 1812 A-4

This report is prepared to define the condition of the aircraft as of factory completion for conditional acceptance by the Air Force. This report shall be revised to reflect the exact configuration as of the time of final acceptance by the Air Force.

PART I:

The following items are deviations from contractural requirements for Model F-102A Airplane, AF Serial No. 53-1798.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 31 September 1955, are as follows:

ECP No. (CAC-F102-)	Title
1029	Mooring Eye Bolts and Jack Pads - Deletion of
1069	Negative "G" Valve - Deletion of

2. Engineering data listed in exhibit of the contract which were required to be submitted prior to 31 September 1955, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract exhibit):

Report No.	Title
ZS-8-054	Armament Loads
Remarks:	Reason for non-submittal; Motions load data not available at this time, due to enadequate flight test corrallation of reac and test stand loads. Anticipated submittal date is 1 October 1955..
ZS-8-059	Armament Analysis
Remarks:	(Same as ZS-8-054 above) Anticipated submittal date 15 November 1955.

3. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-091 dated 19 February 1954, Revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 31 September 1955.

4. Equipment listed in Industry Developed Equipment Status Report, Report No . ZM-8-091, dated 19 February 1954, Revised 21 September 1954, which is installed in this airplane, certain of which have not been approved as of 31 September 1955.

Note: It is anticipated that Items 3 and 4 will be revised on 1 December 1955 and each month thereafter.

5. PART A The following are shortages at time of factory completion. It is anticipated that these items will be reflected in the Air Force Form 263C Part 2.

Quantity	Description	Part No.
1	Antenna - Glide Slope Instl. 8-36094	37P-2 or 37P-3
1	Curtain Assy. (Nose Wheel Well) Instl. 8-64122	8-62272-1
1	Curtain Assy. (Nose Wheel Well) Instl. 8-64122	8-62272
1	Curtain Assy. (Nose Wheel Well) Instl. 8-64122	8-62272-3
1	Curtain Assy. (Nose Wheel Well) Instl. 8-64122	8-62272-5
1	Handbook of Flight Operating Instructions Instl. T.O.1-1-10	T.O. 1F-102A-1
1	Illustrated Parts Catalog Instl. T.O.1-1-10	T.O. 1F-102A-4
1	Handbook of Inspection Requirements Instl. T.O. 1-1-10	T.O. 1F-102A-6
1	USAF & USN Radio Facility Charts & In Flight Data Instl. T.O.1-1-10	LF/MF Edition
1	USAF & USN Radio Facility Charts & In Flight Data Instl. T.O.1-1-10	VOR-Editions
1	USAF & USN Supplementary Flight Information - USA Instl. T.O.1-1-10	None
1	USAF & USN Pilot Handbook Jet - East & West - USA Instl. T.O.1-1-10	Vol. 1 & 2
1	Invoice & Invoice Envelope c/w: Six Stamped Envelopes Instl. T.O.1-1-10	AF Form 15 & 15A

5. PART A (Cont)

Quantity	Description	Part No.
1	Handbook of Weight & Balance Data Instl. T.O.1-1-10	T.O.1-10-40 (AN01-1B-40)
1	Handbook of Operating Instructions Inter-Communication AN/AIC-10 Instl. T.O.1-1-10	T.O. 12R2-2AIC10-1
1	Handbook of Operating Instructions Radio Set AN/ARC-34 Instl. T.O.1-1-10	T.O. 12R2-2ARC34-1
1	Handbook of Maintenance Instructions (General Airplane) Instl. T.O.1-1-10	T.O. 1F-102A-2-1
1	Handbook of Maintenance Instructions (Airframe Group) Instl. T.O.1-1-10	T.O. 1F-102A-2-2
1	Handbook of Maintenance Instructions (Hydraulic and Pneumatic Power Systems) Instl. T.O.1-1-10	T.O. 1F-102A-2-3
1	Handbook of Maintenance Instructions (Power Plant) Instl. T.O.1-1-10	T.O. 1F-102A-2-4
1	Handbook of Maintenance Instructions (Fuel Supply System) Instl. T.O.1-1-10	T.O. 1F-102A-2-5
1	Handbook of Maintenance Instructions (Air Conditioning, Pressurization and Anti-icing Systems) Instl. T.O.1-1-10	T.O. 1F-102A-2-6
1	Handbook of Maintenance Instructions (Flight Control Systems) Instl. T.O.1-1-10	T.O. 1F-102A-2-7
1	Handbook of Maintenance Instructions (Landing Gear) Instl. T.O.1-1-10	T.O. 1F-102A-2-8
1	Handbook of Maintenance Instructions (Instruments) Instl. T.O.1-1-10	T.O. 1F-102A-2-9
1	Handbook of Maintenance Instructions (Electrical Systems) T.O.1-1-10	T.O. 1F-102A-2-10

5. PART A (Cont)

Quantity	Description	Part No.
1	Handbook of Maintenance Instructions (Radio-Communication and Navigation Systems) Instl. T.O.1-1-10	T.O. 1F-102A-2-11
1	Handbook of Maintenance Instructions (Armament and Armament Electronics) Instl. T.O.1-1-10	T.O. 1F-102A-2-12
1	Handbook of Maintenance Instructions (Wiring Data) Instl. T.O.1-1-10	T.O. 1F-102A-2-13
1	Basic Weight Check List and Loading Data Instl. T.O.1-1-10	T.O. 1F-102A-5
1	Amplifier - Calibrator (Pilot Assist) Instl. 8-68146	EG45A-2
1	Coupler - Compass (Pilot Assist) Instl. 8-68146	RG7042A4
1	Launcher - Missile Instl. 8-54990	463054-113
1	Intervalometer - Missile Instl. 8-67186	8-06383-1(D)
1	Intervalometer - Rocket Instl. 8-67186	11093-MOD72
1	Launcher - Missile Instl. 8-54990	463054-113
1	Launcher - Missile Instl. 8-54990	463054-113
1	Launcher - Missile Instl. 8-54990	463054-113
1	Launcher - Missile Instl. 8-54990	463054-113
1	Launcher - Missile Instl. 8-54990	463054-113
1	Pin Assy. - N.L.G. Steering Instl. 8-92935	A-623717
1	Limiter - Pitch (G) Instl. 8-68155	1JD3356

5. PART A (Cont)

Quantity	Description	Part No.
1	Antenna Assy. - Vertical Fin Tip (UHF, Omn. Range & Air to Air IFF) Instl. 8-14509	8-14520
1	Duct Instl. - Int. Anti-Ice Instl. 8-87048	VA707-1
1	Valve Instl. Cabin Air Safety Instl. 8-87047 - Basic	VA 649-3
1each	Fus Radome Sect - Instl Instl. 8-73912-901	TVA38463-905,-51
2	Fus Radome Sect - Instl Instl. 8-73912-901	TVA-38463-51
1	Tube Instl - Fuel Tank #1R/H Instl. 8-20394-900	8-10394-383
1	Tube Instl - Fuel Tank #1L/H Instl. 8-20394-901	8-20394-381
1	Instl - Harn Elec Instl. 8-68908-9847	CVAC #REL 277-1
1	Instl - Harn Elec Instl. 8-62545-9805	REL 277-1
2	Actuator Instl Instl. 8-16953-2	8-80203-9
1	Refrig Package Instl Instl. 8-87026 B/N	REFRIG 4-7
1	Refrig Package Instl Instl. 8-87026 B/N	REFRIG 4-8
1	Actuator Instl - Elevon Instl. 8-81045-900	VA 1056-1
1	Instl Harn Elect Instl, 8-67611-9000	8-67611
6	Bracket Instl Instl. 8-80202-900	8-80202-167

5. PART A (Cont)

Quantity	Description	Part No.
2	Beam Instl Tail Cone Att Instl. 8-73102-900	8-73990-7
1	Beam Instl Tail Cone Att Instl. 8-73105-1	8-73990-11
1	Beam Instl Tail Cone Att Instl. 8-73105-2	8-73990-11

5. PART B

Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpeted to mean the flight test assignment or the intended usage.

Description: ACA 8-653 - Windshield De-fog Circuit, Add Transformers, change wire gauges, revise circuits, etc., to increase wattage on Nesa glass.
Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep windshield free of ice.
Limitation: The airplane should not be flown in icing conditions until ACA 8-653 has been incorporated. Also de-fog may not be provided under extreme conditions.

Description: ACA 8-638 Windshield Overheat Warning Circuit - Addition of
Part No.: UN 108, THER 19
Quantity: One each
Remarks: This ACA provides for illumination of placard on caution panel if windshield vinyl overheats. Overheating will cause bubbles in windshield and necessitate replacement.
Limitation: Windshield rain clearing shall not be used on a dry windshield and for not more than 1-1/2 min. when wet.

Description: ACA 8-649 - Elevon Actuator Rod End Attachment - Revision to
Remarks: This ACA increases length of bushings and chrome plates the attaching bolt to prevent galling action between the elevon actuator rod end bearing inner race and the attaching bolt.
Limitation: Elevon actuator bearings should be lubricated after every 5 flight hours and rod end bearings inspected after every 10 hours of flight.

Description: Pilot Assist (Ref. ACA 8-724 & ACA 8-523)
Part No.: UN 100, UN 36-28, POTE 103-1
Quantity: One each UN 100, & UN 36-28 and 2 POTE 103-1
Remarks: Pilot assist system shall not be used unless above items are installed. (UN 100 installed by original design release)

5. PART B (Cont)

Description: Trim Servo & Speed Brake (Ref. ACA 8-740)
Part No.: UN 110-1, UN 110-2, UN 110-3, UN 110-5
Quantity: One each
Remarks: There will be no automatic elevator deflection to compensate for pitching effect from speed brake extension and no automatic trim for unstable stick forces until above units are installed.

Description: Missile Intervalometer Install. (Ref. ECP 1034)
Part No.: UN 120 Intervalometer
Quantity: One
Remarks: Must be installed prior to firing more than one missile at a time.

Description: Rocket Intervalometer Install. (Ref. TVA#42000)
Part No.: UN 66-2 Intervalometer
Quantity: One
Remarks: Substitution of UN 66-1 for UN 66-2 is acceptable for firing except CVAC UN 66-1 is not designed for 14 volt operation. Do not attempt to operate armament system on emergency D.C. power.

Description: Pitch Damper System - ACA 8-10851 (Ament)
Part No.: UN 100
Quantity: One each
Remarks: Pitch damper system shall not be used below 15,000 ft. until UN 100 is installed.

Description: Constant Speed Drive - Oil System for
Part No.: 8-20503
Quantity: One
Remarks: Zero or negative "G" maneuvers shall be limited to three (3) seconds. Until a satisfactory oil system is designed, maneuvers in excess of that mentioned above will not supply oil to the unit during zero or negative "G" conditions.

Description: Rain Clearing System (Ref. ACA 8-13469)
Part No.: VA 931-1 Valve
Quantity: One
Remarks: Valve is replaced by solid plug in duct valve, making rain clearing system inoperative.
Limitation: All-weather operations should not be planned until valve VA 931-1 is installed.

5. PART B (Cont)

Description: Anti-Icing - Engine Duct Lips (Ref. ACA 8-13569)
Part No.: VA 707-1
Quantity: One
Remarks: Valve is replaced by solid plug in duct valve making anti-icing of engine duct lips inoperable.
Limitation: All-weather operations should not be planned until valve VA 707-1 is installed.

Description: ACA 8-531 & ACA 8-13449 - Hydraulic system relief valve - Addition of Thermal Venting
Part No.: VA 981-1 Valve
Quantity: Two each
Remarks: In case of pump flow control malfunctioning the Hydraulic oil may heat up by working against the relief valve pressure. With this valve (VA981-1) the relief valve will open at predetermined oil temperature to protect the system.
Limitation: Land as soon as possible if primary or secondary system oil pressure indicator consistently shows above 3500 psi.

Description: ACA 8-716 Relief Valve Install. - Mid-Electronic Compt.
Part No.: 8-89148 valve ass'y.
Quantity: One each
Remarks: The relief is installed to control internal fuselage pressure in the nose wheel and forward electronic area.
Limitation: (1) This change must be incorporated before missile and/or rocket firing.
(2) Do not operate aircraft above 50,000 ft. with electronic equipment installed.

Description: ACA 8-13699 Drag Parachute Ripcord Cable Release
Part No.: 8-44460-7 Guide
Quantity: One each
Remarks: The guide has been changed to provide closer fit and greater length of plunger (8-44439) engagement.
Limitation: Inspect before each flight that plunger, 8-44439 and guide 8-44460 are in line.

Description: 8-14520 - Fin Tip
Remarks: Installed interim fin tip. (Any tip prior to Vendor Serial No. 20.)
Limitation: Until 8-14520 Fin Tip (Vendor Serial No. 20 and on) is installed, this airplane is limited to a "G" loading of .80 design limit load.

5. PART B (Cont)

The following limitation, though not due to parts shortage, should also be noted.

Description: Mid-Electronics Door (Data Link Antenna Installation)
Remarks: A satisfactory UHF Data Link antenna has not been developed for incorporation in the mid-electronics door. A similar door deleting the antenna installation has been installed. No limitations are imposed on the aircraft until the MG 10 - Data Link installations are made.

Description: Missile Launching System
Remarks: Launcher extension and retraction times are in excess of that required by Model Specification. A fast action system is being developed to be compatible with specification requirements but is not available for incorporation in this airplane. The only limitations or restrictions imposed with this slower system is the reduction in kill probability due to having to stay on target longer periods of time to fire an equivalent number of missiles.

6. List of materials, Report No. ZM-8-116 Revised 17 May 1954 listing materials used on this airplane which were not approved as of 31 September 1955.

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION

SAN DIEGO

REPORT ZD-8-027A

DATE 1 Nov 1956

MODEL F-102A

TITLE

REPORT NO. ZD-8-027
DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANE AF S/N 53-1798
CONTRACT AF33(600)-5942

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

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A	11-1-56	DDF	Revised and rewritten	All

FORM 1812A-4

PART I:

The following items are deviations from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1798.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 8 October 1956, are as follows:

ECP No. (CAC-F102-)	Title
	None

2. Engineering data listed in exhibit of the contract which were required to be submitted prior to 1 November 1956, but which have not been submitted as of that date, are as follows:

Report No.	Title
ZS-8-059	Armament Analysis (Anticipated submittal date 5 November 1956)

3. PART A The following are shortages at time of factory completion. It is anticipated that these items will be reflected in the Department of Defense Form DD 250.

3. PART B Shortages as listed in Department of Defense Form DD 780, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or the intended usage.

A. The unaccomplished task and limitations on 8-10 #8 have been reviewed. Until the items noted herein have been cleared, the following restrictions and limitations should be indicated on DD Form 781 and in the required Service Handbooks where applicable. These restrictions must be observed in addition to those existing in the Flight Handbook.

NOTE: Since this airplane has been under an accelerated flight test program by the Contractor and will continue so under North American Aviation testing, the Specification Conformance Changes (Report ZM-8-162) have not been accomplished except where necessary. Restrictions due to this unaccomplished task are identified by an asterisk (*).

1. Description: Speed and Symmetrical Load Factor Limitations

Limitation: Limit Dive Speed except

a. Above 8,000 feet the airplane is limited to 570 knots IAS or Mach 1.25, whichever occurs first. (Buzz Fix. 20 inch inlet duct ramp extension - not scheduled.)

b. Maximum of 550 knots IAS below 10,000 feet (Replacement of Heli-coil insert in engine inlet duct with a satisfactory fastener - ACA 8-1443)

c. Symmetrical normal load factor is +5.6 g to -2.4 g, except at speeds in excess of 480 knots IAS below 12,000 feet where the load factor is +5.6 g to -1.4 g (pending completion of flight loads program.)

3. PART B (Cont)

*2. Description: Roll Maneuver and Asymmetric Load Factor Limitations (Ref. ACA 8-754 and 8-884)

Limitation:

a. Flight region above 12,000 feet, or below 12,000 feet and 480 knots IAS.

(1) No roll rate restrictions for positive quadrant rolls. (90° either side of level flight.)

(2) Do not exceed 80° per second for 360° rolls.

(3) Uncoordinated maneuvers are prohibited.

b. For flight regions above 480 knots IAS and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75 g.

*3. Description: Electronic Equipment - Ground Cooling of (Ref. ACA 8-16068)

Part No: CVAC DU 197-3 Coupling

Quantity: One

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until DU 197-3 is installed.

3. PART B (Cont)

*4. Description: Electronic Equipment - Ground Cooling of (Ref. ACA 8-15083, 8-15178, 8-16068, 8-1006, 8-18320)

Remarks: TVA 38104B against Drawing 8-60674 de-activates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

*5. Description: Electronic Equipment - Ground Cooling of

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(Ref ACA 8-699      8-14628    8-15178
         8-14605    8-14714    8-14386
         8-14621    8-15083    8-16068 )
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Remarks: Present system provides inadequate ground cooling unless connected to ground equipment.

Limitation: Electronic equipment should not be operated on the ground unless connected to ground cooling equipment.

NOTE: After cooling equipment has been installed by the above ACA's, TVA 38104B still deactivates the system until incorporation of ACA 8-1006; thereby protecting the ducts from high pressure and temperature if the throttle is rapidly retarded.

3. PART B (Cont)

*6. Description: Relief Valve Installation - Mid Electronics Comp't (Ref. ACA 8-716)

Remarks: Relief Valve is installed to control internal fuselage pressure in the nose wheel well and forward electronic area.

Limitation: Do not operate aircraft above 50,000 feet with electronic equipment installed.

*7. Description: Radome Anti-Ice System (Ref. ACA 8-13828)

Remarks: Present anti-ice distribution ring found inadequate in tests.

Limitation: Reduced radar capability during icing conditions.

*8. Description: Boundary Layer Bleed Duct - Manifolding of (Ref. ACA 8-796 and 8-17188)

Remarks: Incorporation of the above ACA's permits equal flow from each boundary layer duct when ram air pressure regulator valve is closed.

Limitation: Missile firing at speeds above 375 knots IAS hazardous as ram air valve closes and causes severe vibration.

*9. Description: Anti-Icing - Engine Duct Lips (Ref. ACA 8-13569)

Remarks: Valve is replaced by solid plug (TVA 40578) in duct valve making anti-icing of engine duct lips inoperative.

Limitation: All weather operations should not be planned until VA 1072 is installed in accordance with ACA 8-13569.

3. PART B (Cont)

10.	Description:	Constant Speed Drive - Oil System for (Ref. ECP 1129, ACA 8-1080 and 8-16070)
	Part No:	GFAE #660599
	Quantity:	One
	Limitation:	Until the above ECP is accomplished, zero or negative "g" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "g" conditions and lack of AC power may occur.
*11.	Description:	Pilot Assist System (Ref. T.O. 1F-102A-527)
	Remarks:	At present there is no pilot assist system installed.
	Limitation:	Fully automatic control not available.
*12.	Description:	Thermal Venting Relief Valve - Installation of (Ref. ACA 8-531, 8-13449, 8-16188NF)
	Remarks:	In case of pump flow control malfunctioning the hydraulic oil may heat up by working against the relief valve pressure. With this valve (VA 981-1) the relief valve will open at pre-determined oil temperature to protect the system.
	Limitation:	Land as soon as possible if primary or secondary system oil pressure indicator consistently shows above 3500 psi.

3. PART B (Cont)

13. Description: Elevator Actuator Rod End Attachment - Revision to (Ref. ACA 8-649)

Remarks: This ACA increases length of bushings and chrome plates the attaching bolt to prevent galling between the elevon actuator rod end bearing inner race and the attaching bolt. Note: Improved bearings have been installed but the following limitation still exists pending further evaluation.

Limitation: Elevon Actuator Bearings should be lubricated after every 5 flight hours and rod end bearings inspected after every 10 hours of flight.

*14. Description: Canopy Cinch-Down Actuating Mechanism - All Weather Protection.
(Ref. ACA 8-14368, 8-14682, 8-14889NF, 8-14482, 8-15797, 8-14838NF, 8-14839, 8-13605, 8-14846)

Remarks: With all-weather seal installed on canopy, air spring counter-balance is revised to provide a pull-down force sufficiently to compress the seal and latch the canopy.

Limitation: Parked aircraft in rain must be protected against water leakage into cockpit.

*15. Description: Missile Intervalometer Installation (Ref. ACA 8-14444)

Limitation: Missile Intervalometer (CVAC UN 120) must be installed prior to firing missiles or opening doors in the Missile Mode.

3. PART B (Cont)

*16. Description: Oxygen Duration (Ref. ECP 1065)

Remarks: Oxygen quantity should be observed until the capacity is increased by the addition of one bottle to the present system (ECP 1065) or the liquid oxygen supply system is installed (ECP 1057).

Since reserve oxygen supply is limited with present system, excessive use before take-off or use of pressure helmet can result in oxygen duration being less than flight duration.

Limitation: Oxygen quantity should be checked periodically during flight.

*17. Description: Rocket Intervalometer Installation (Ref. ACA 8-12781 NF)

Part No: CVAC UN 66-2 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing rockets or opening doors in the rocket mode.

3. PART B (Cont)

B. Limitations due to instrumentation installations are as follows:

1. Description: Missile Bay Doors

   Remarks: In-flight opening provisions inoperative - can be opened from NWW control.

   Limitation: No armament operation

2. Description: Missile Launcher Assemblies

   Remarks: The forward center, aft center, R/H aft, and L/H aft launcher assemblies and aft center missile bay blast shield removed - instrumentation racks and junction box installed.

   Limitation: No armament operation

3. Description: Radome Anti-Icing (Ref. TVA 35285 and 35286)

   Remarks: Inoperative - Glycol tanks and tubing removed

   Limitation: No operation under icing conditions

4. Description: Electronics Ground Cooling (Ref. TVA 36494)

   Remarks: NWW door closed relay deactivated and ground cooling duct removed from mid electronic bay.

   Limitation: No electronics compartment ground cooling.

3. PART B (Cont)

C. As a matter of information, the following items have been included in this report to further describe the subject airplane:

1. H.E.P. valves are installed in the control system in place of lock-out valves, yoke and servo actuator (Ref. ACA 8-1088 and TVA 47119).

2. A CONTR 110-8 Shelly unit Q system loader is installed in place of CONTR 110-5 (Ref. ACA 8-1623 and TVA 47103).

3. Since this airplane has been in a flight test program, instrumentation racks in nose radar compartments and missile bays and all inter area instrumentation wiring and switches are installed. Wires remain connected from J Box A in R/H nose radar compartment to J Box C in R/H aft missile bay. No power leads are installed in either J box and all other wiring has been tied back and switches disconnected. All instrumentation tubing is installed and either capped off or disconnected where it ties into the airplane system.

3. PART C Unaccomplished work task on this airplane at time of final acceptance shall be referenced in Department of Defense Form DD 250, Shipment No. 16395, Pages 1 through 64 inclusive.

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-028
DATE 31 Sept 1955
MODEL F-102A

TITLE

REPORT NO. ZD-8-028
DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANE AF S/N 53-1799
CONTRACT AF33(600)-5942

PREPARED BY ______________________

GROUP Project Specifications

REFERENCE ______________________

CHECKED BY ______________________

APPROVED BY ______________________

NO. OF PAGES ____________

NO. OF DIAGRAMS ____________

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

FORM 1612A-4

This report is prepared to define the condition of the aircraft as of factory completion for conditional Air Force acceptance on 31 September 1955.

PART A

The following items are deviations from contractural requirements for Model F-102A Airplane, AF Serial No. 53-1799.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 1 Sept 1955, are as follows:

ECP No. (CAC-F102-)	Title
1029	Mooring Eye Bolts and Jack Pads - Deletion of:
1069	Negative "G" Valve - Deletion of:

2. List of required flight tests, Report No. ZC-8-117, revised 30 August 1955, that have not been accomplished on any airplane as of 31 September 1955.

3. Engineering data listed in exhibit of the contract which were required to be submitted prior to 31 September 1955, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract exhibit):

ITEM 6 OF THE CONTRACT

Exhibit "A"

Para. (b) Stress Analysis

Report No.	Title
ZS-8-054	Armament Loads
Remarks:	Reason for nonsubmittal; Motions load data not available at this time, due to enadequate flight test corallation of reac and test stand loads. Anticipated submittal date is 1 October 1955.
ZS-8-059	Armament Analysis
Remarks:	(Same as ZS-8-054 above) Anticipated submittal date 15 November 1955.

PART A (Cont)

4. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-091 dated 19 February 1954, Revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 31 September 1955.

5. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, Revised 21 September 1954, which is installed in this airplane, certain of which have not been approved as of 31 September 1955.

NOTE: It is anticipated that items 4 and 5 will be revised on 1 December 1955 and each month thereafter.

6. PART A The following are shortages at time of factory completion. It is anticipated that these items will be reflected in the Air Force Form 263C Part 2.

Quantity	Description	Part No.
1	Antenna - Radar Instl. 8-36116	463017-100
1	Duct - Cooling Air (Transmitter) Instl. 8-36116	463190-110
1	Duct - Cooling Air (Magnetron) Instl. 8-36116	463090-110
1	Coupler - Directional (Radar) Instl. 8-36116	463084-110
1	Attenuator - Fixed (Unidirectional) Instl. 8-36116	423079-110
1	Waveguide Assy. - Radar Instl. 8-36116	463016-110
1	Coupler - Directional (Radar Test) Instl. 8-36116	463184-100
1	Receiver - Transmitter - Radar Instl. 8-36116	423011-120
1	Cooler Unit - Air Gyrator Instl. 8-36116	423068-100
1	Indicator - Pressure Instl. 8-36159	463024-100
1	Coupler - Directional (Auxiliary) Instl. 8-36179	423153-110
1	Rack - Electrical Equipment Instl. 8-36121	463901-110
1	Amplifier - Electronic Control (XMTR Tuning) Instl. 8-36121	423014-120
1	Rack - Electrical Equipment Instl. 8-36116	463273-110
1	Converter - Signal Data Instl. 8-36116	479023-120
1	Synchronizer - Electric Instl. 8-36116	423003-110

6. PART A (Cont)

Quantity	Description	Part No.
1	Test Set - Computer Instl. 8-36116	479096-130
1	Timer - Stop Instl. 8-36116	479091-111
1	Computer - Ballistics (Flight Data) Instl. 8-36116	479046-140
1	Indicator - Control Radar Instl. 8-36116	463072-110
1	Control - Computer (Flight Data) Instl. 8-36116	463086-100
1	Transformer - Power, Fixed Auto Transformer - XMTR Instl..8-36164	463148-100
1	Compressor - Reciprocating (Power Driven - Air) Instl. 8-36162	463045-110
1	Valve - Sutomatic (Regulating Press.) Instl. 8-36135	463691-110
1	Computer - Navigational (Air Data) Instl. 8-36119	463013-100
1	Control - Computer (Air Data) Instl. 8-36119	463113-100
1	Transmitter - Pressure (Static) Instl. 8-36119	423076-100
1	Transmitter - Pressure (Differential) Instl. 8-36119	423077-100
1	Rack - Electrical Equipment Instl. 8-36116	463073-110
1	Computer - Air Navigation (TAU) Instl. 8-36116	423128-110
1	Computer - Range (F) Instl. 8-36116	463147-100

6. PART A (Cont)

Quantity	Description	Part No.
1	Amplifier - Electronic Control (Radar Antenna) Instl. 8-36116	479009-130
1	Inter-Connecting Box - Radar Power Instl. 8-36116	463018-110
2	Regulator - Voltage (- 250 Volts) Instl. 8-36116 & 8-36127	463491-100
1	Control - Converter (Indicator Display) Instl. 8-36116	463955-100
1	Regulator - Voltage (+250 Volts) Instl. 8-36116 & 8-36127	463391-100
2	Amplifier - Electronic Control (Antenna Tracking) Instl. 8-36116	479041-110
1	Regulator - Voltage (+300 Volts) Instl. 8-36116	463291-100
1	Regulator - Voltage (+150 Volts) Instl. 8-36116	463591-100
1	Recorder - Signal Data Instl. 8-36116	423049-100
1	Computer - Air Navigation (R) Instl. 8-36116	463228-100
1	Computer - Air Navigation (RHO) Instl. 8-36116	423328-110
1	Computer - Altitude (Differential) Instl. 8-36116	423347-100
1	Controller - Altitude (Differential Correction) Instl. 8-36116	423247-100
1	Light Assy. - Taxi Instl. 8-67005	4570
1	Curtain Assy. (Nose Wheel Well) Instl. 8-64122	8-62272-1

6. PART A (Cont)

Quantity	Description	Part No.
1	Curtain Assy. (Nose Wheel Well) Instl. 8-64122	8-62272
1	Curtain Assy. (Nose Wheel Well) IInstl. 8-64122	8-62272-3
1	Curtain Assy. (Nose Wheel Well) Instl. 8-64122	8-62272-5
1	Control - Indicator Instl. 8-38019	463455-100
1	Indicator - Flight Command, Search and Attack Instl. 8-94705	463080-110
1	Filter Assy. - Light Cathode Ray Tube Instl. 8-94705	463025-100
1	Control - Indicator Instl. 8-38019	463355-100
1	Control - Antenna (Scanning) Instl. 8-38019	463155-110
1	Control - Radar Set Instl. 8-38019	463255-100
1	Flight Control Group - Manual Aircraft and Radar Antenna Instl. 8-49515	463083-110
1	Card - Compass Standby Instl. 8-38023	AN5823-1
1	Lamp Assy. - Spare (Red) Instl. 8-94700	AN3121-R313
1	Compass-Magnetic, 28V, Pilot Stand-by (Type AN5766-T4 or Type AN5766-4) Instl. 8-38024	MIL-C-5604
1	Antenna Data Link	Not Released

6. PART A (Cont)

Quantity	Description	Part No.
1	Dehydrator Instl. 8-36093	463097-100
1	Control - Roll & Pitch Instl. 8-36143	435-27-0001
1	Gyro - Vertical Instl. 8-68159	UN36-28
1	Regulator - Voltage (+150 Volts) Instl. 8-36101	463591-100
1	Oscillator - R.F. Instl. 8-36101	423093-110
1	Synchronizer - Electrical (Auxiliary) Instl. 8-36101	423033-120
1	Regulator Assy. - Voltage (Carbon Pile) Instl. 8-36101	463191-100
1	Amplifier - Synchro (Signal - Roll) Instl. 8-36101	479058-100
1	Motor - Generator (D.C. Supply) Instl. 8-36111	463002-100
1	Rack - Electrical Equipment - Parameter setting Relay Assy. Instl. 8-36112	463111-120
2	Relay Assy. - Parameter (Setting) Instl. 8-36112	423036-120
1	Filter - Radio Interference (D.C.) Instl. 8-36129	463412-110
1	Filter - Radio Interference (A.C.) Instl. 8-36129	463512-110
6	Mixer Stage - Frequency Instl. 8-54990	423187-120
1	Intervalometer - Missile Instl. 8-67186	8-06383-1(D)
1	Intervalometer - Rocket Instl. 8-67186	11093-MOD72

6. PART A (Cont)

Quantity	Description	Part No.
3	Coupler - Directional (Attenuator) Instl. 8-36168	423053-110
1	Cylinder Assy. - Oxygen Instl. 8-92437	870337
1	Accelerometer Aircraft - Normal Instl. 8-36150	424161-100
1	Control - Rate of Turn Instl. 8-36177	463227-110
1	Relay Assy. - (Armament Control) Instl. 8-36127	463057-110
6	Amplifier - Electronic Control (Missile AFC) Instl. 8-36127	423107-110
6	Amplifier - Electronic Control (Missile Gate) Instl. 8-36127	423106-110
1	Amplifier - Missile (Antenna Control) Instl. 8-36127	463005-120
2	Box - Interconnection (Missile Auxiliaries) Instl. 8-36138	463004-100
1	Accelerometer - Aircraft Instl. 8-36122	463061-100
2	Control - Power Supply (Missile Heating) Instl. 8-36134	463305-110
1	Pin Assy. - N.L.G. Steering Instl. 8-92935	A-623717
1	Limiter - Pitch (G) Instl. 8-68155	1JD3356

6. PART B Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpeted to mean the flight test assignment or the intended usage.

Description: Anti-Icing - Engine Duct Lips (Ref. ACA 8-13569)
Part No.: VA 707-1
Quantity: One
Remarks: Valve is replaced by solid plug in duct valve making anti-icing of engine duct lips inoperable.
Limitation: All-weather operations should not be planned until valve VA 707-1 is installed.

Description: Pilot Assist (Ref. ACA 8-724 & ACA 8-523)
Part No.: UN 100, UN 36-28, POTE 103-1
Quantity: One each UN 100, & UN 36-28 and 2 POTE 103-1
Remarks: Pilot assist system shall not be used unless above items are installed. (UN 100 installed by original design release)

Description: Pitch Damper System - ACA 8-10851 (Amend)
Part No.: UN 100
Quantity: One each
Remarks: Pitch damper system shall not be used below 15,000 ft. until UN 100 is installed.

Description: Trim Servo & Speed Brake (Ref. ACA 8-740)
Part No.: UN 110-1, UN 110-2, UN 110-3, UN 110-5
Quantity: One each
Remarks: There will be no automatic elevator deflection to compensate for pitching effect from speed brake extension and no automatic trim for unstable stick forces until above units are installed.

Description: Missile Intervalometer Install. (Ref. ECP 1034 & ACA 8-591)
Part No.: UN 120 Intervalometer
Quantity: One
Remarks: Must be installed prior to firing more than one missile at a time.

Description: Rocket Intervalometer Install. (Ref. TVA#42000)
Part No.: UN 66-2 Intervalometer
Quantity: One
Remarks: Substitution of UN 66-1 for UN 66-2 is acceptable for firing except CVAC UN 66-1 is not designed for 14 volt operation. Do not attempt to operate armament system on emergency D.C. power.

6. PART B (Cont)

Description: 8-14520 - Fin Tip
Remarks: Installed interim fin tip. (Any tip prior to Vendor Serial No. 20.)
Limitation: Until 8-14520 Fin Tip (Vendor Serial No. 20 and on) is installed, this airplane is limited to a "G" loading of .80 design limit load.

Description: ACA 8-653 - Windshield De-fog Circuit, Add Transformers, change wire gauges, revise circuits, etc., to increase wattage on Nesa glass.
Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep windshield free of ice.
Limitation: The airplane should not be flown in icing conditions until ACA 8-653 has been incorporated. Also defog may not be provided under extreme conditions.

Description: ACA 8-649 - Elevon Actuator Rod End Attachment Revision to
Remarks: This ACA increases length of bushings and chrome plates the attaching bolt to prevent galling action between the elevon actuator rod end bearing inner race and the attaching bolt.
Limitation: Elevon actuator bearings should be lubricated after every 5 flight hours and rod end bearings inspected after every 10 hours of flight.

Description: ACA 8-617 - Electrical Receptacle, Fwd Fuel Cell - Revision of
Remarks: Provides seal at fwd fuel cell electrical receptacle.
Limitation: Must be accomplished before missile and/or rocket firing to prevent missile dust from entering area between wing and fuselage, thus causing corrosion.

Description: ACA 8-531 & ACA 8-13449 - Hydraulic system relief valve - Addition of Thermal Venting
Part No.: VA 981-1 Valve
Quantity: Two each
Remarks: In case of pump flow control malfunctioning the Hydraulic oil may heat up by working against the relief valve pressure. With this valve (VA981-1) the relief valve will open at predetermined oil temperature to protect the system.
Limitation: Land as soon as possible if primary or secondary system oil pressure indicator consistently shows above 3500 psi.

6. PART B (Cont)

Description:	ACA 8-716 Relief Valve Install. - Mid-Electronic Compt.
Quantity:	One each
Part No.:	8-89148 valve ass'y.
Remarks:	This relief is installed to control internal fuselage pressure in the nose wheel and forward electronic area.
Limitation:	(1) This change must be incorporated before missile and/or rocket firing. (2) Do not operate aircraft above 50,000 ft. with electronic equipment installed.

Description:	ACA 8-638 Windshield Overheat Warning Circuit - Addition of
Part No.:	UN 108, THER 19
Quantity:	One each
Remarks:	This ACA provides for illumination of placard on caution panel if windshield vinyl overheats. Overheating will cause bubbles in windshield and necessitate replacement.
Limitation:	Windshield rain clearing shall not be used on a dry windshield and for not more than 1-1/2 min. when wet.

The following limitations though not due to parts shortage, should also be noted.

Description:	Mid-Electronics Door (Data link antenna Installation)
Remarks:	A satisfactory UHF Data Link Antenna has not been developed for incorporation in the mid-electronics door. A similar door deleting the antenna installation has been installed. No limitations are imposed on the aircraft until the MG 10 - Data Link installations are made.

Description:	Missile Launching System
Remarks:	Launcher extension and retraction times are in excess of that required by Model Specification. A fast action system is being developed to be compatible with specification requirements but is not available for incorporation in this airplane. The only limitations or restrictions imposed with this slower system is the reduction in kill probability due to having to stay on target longer periods of time to fire an equivalent number of missiles.

7. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 31 September 1955.

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-028
DATE 31 Sept 1955
MODEL F-102A

TITLE
REPORT NO. ZD-8-028

DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANE AF S/N 53-1799

CONTRACT AF33(600)-5942

PREPARED BY ____________________

GROUP Project Specifications

REFERENCE ____________________

CHECKED BY ____________________

APPROVED BY ____________________

NO. OF PAGES ____________

NO. OF DIAGRAMS ____________

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
A	9-12-56	DDF	Revised	All

FORM 1812A-4

This report is prepared to define the condition of the aircraft as of factory completion for Air Force acceptance.

The following items are deviations from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1799.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 12 September 1956, are as follows:

ECP No. (CAC-F-102-)	Title
	None

2. Engineering data listed in exhibit of the contract which were required to be submitted prior to 12 September 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract exhibit):

ITEM 6 OF THE CONTRACT

Exhibit "A"

Para. (a) Stress Analysis

Report No.	Title
ZS-8-059	Armament Analysis
Remarks:	Anticipated submittal date October 1956

3. PART A The following are shortages at time of factory completion. It is anticipated that these items will be reflected in the Department of Defense Form DD-250

Quantity	Description	Part No.
	None	

3. PART B Shortages as listed in Department of Defense Form DD 780 which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpeted to mean the flight test assignment or the intended usage.

A. The unaccomplished task and limitations on 8-10 #9 have been reviewed. Until the items noted herein have been cleared, the following restrictions and limitations should be indicated on DD Form 781 and in the required Service Handbooks where applicable. These restrictions must be observed in addition to those existing in the Flight Handbook.

NOTE: Since this airplane has been under an accelerated flight test program by the Contractor and will continue so under HAC testing, the Specification Conformance Changes (Report ZM-8-162) have not been accomplished except where necessary. Restrictions due to this unaccomplished task are identified by an asterisk (*).

1. Description: Speed and Symmetrical Load Factor Limitations

Limitation: Limit Dive Speed except

a. Above 8,000 feet the airplane is limited to 570 knots I.A.S. or Mach 1.25, whichever occurs first. (Buzz Fix. 20 inch inlet duct ramp extension not scheduled.)

b. Maximum of 550 knots I.A.S. below 10,000 feet (Replacement of Heli-coil insert in engine inlet duct with a satisfactory fastener - ACA 8-1443)

c. Maximum of 585 knots I.A.S. pending incorporation of structural reinforcement of cross tie between inlet ducts at Sta. 298.05 (Ref. ACA 8-880).

d. Symmetrical normal load factor is +5.6g. to -2.4 g. except at speeds in excess of 480 knots I.A.S. below 12,000 feet where the load factor is 5.6 g. to -1.4 g. (pending completion of flight loads program.)

e. This airplane is limited to a load factor of +5.6 g. until interim Fin Tip is replaced with production tip (ACA 8-13563. CVAC P/N 8-14520-1. Vendor Serial Number 20 and on.)

*2 Description: Roll Maneuver and Asymmetric Load Factor Limitations (Ref. ACA 8-754 and 8-884)

Limitations:

a. Flight region above 12,000 feet, or below 12,000 feet and 480 knots I.A.S.

   (1) No roll rate restrictions for positive quadrant rolls. (90° either side of level flight.)

   (2) Do not exceed 80° per second for 360° rolls.

   (3) Uncoordinated maneuvers are prohibited.

b. For flight regions above 480 knots I. I.A.S. and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75 g.

*3 Description: Electronic Equipment - Ground Cooling of (Ref. ACA 8-16068)

Part No: CVAC DU 197-3 Coupling

Quantity: One

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until DU 197-3 is installed.

*4 Description: Electronic Equipment - Ground Cooling of (Ref. ACA 8-15083, 8-15178, 8-16068, 8-1006)

Remarks: TVA 38104B against drawing 8-60674 deactivates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

*	Description:	Constant Speed Drive - Oil System for (Ref. ECP 1129, ACA 8-1080 and 8-16070)
	Part No:	G.F.A.E. #660599
	Quantity:	One
	Limitation:	Until the above ECP is accomplished, zero or negative "g" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "g" conditions and lack of AC power may occur.
*	Description:	Improved Fuel System (Ref. ACA 8-795 8-15177 8-14834 8-15176 8-14943 8-15640 8-15062 8-15537NF 8-14764 8-16268NF 8-15846 8-15737NF 8-15074 8-16044NF)
	Remarks:	Provides twin boost pump installation to pick up fuel in all attitudes of flight, thus decreasing the amount of unusable fuel.
	Limitation:	Until twin boost pumps are installed, alternate climbs and dives and similar maneuvers with low fuel quantity is restricted.
	Description:	Pitch and Yaw Damper Operation (Ref. ACA 8-768 8-11864 8-764 8-834 8-14629 8-15079 8-10933 8-14886NF)
	Remarks:	Reliability and functions of the existing system is sub-marginal without incorporating the above ACA's.
	Limitation:	Pitch damper system shall not be used below 12,000 feet at speeds in excess of 480 knots I.A.S. pending completion of flight tests.
*	Description:	Trim Servo System (Ref. ACA 8-740 8-15124 8-15101 8-14496 8-12364 8-484) 8-14543

* Remarks: Without a trim servo system, a stable stick force gradient is not available and no pitch trim compensation is provided when speed brakes are operated.

Limitation: None. Airplane difficult to fly on Manual or Direct Manual mode.

* Description: Differential Linkage - Elevator System (Ref. ACA 8-500, 8-14623, 8-14626, 8-14647

Remarks: Elevator controls considered too sensitive.

Limitation: None. Precise flying in certain regimes difficult.

* Description: Pilot Assist System.
(Ref. ACA
8-523
8-724
8-734
8-735
8-754
8-757
8-760
8-762
8-764
8-768
8-777
8-810
8-834
8-886
8-884
8-950
8-10933
8-11864
8-14629
8-14196
8-14296
8-14384NF
8-14576
8-14579
8-14704
8-14886NF
8-14887NF
8-14827
8-15057
8-15071NF
8-15079
8-15086
8-15092
8-15103
8-15129
8-15151
8-14155
8-15167
8-15175
8-15212
8-15324
8-15510
8-15616
8-15992
8-15993
8-16294
And a Pitch "G" Limiting Device)

Remarks: At present there is no pilot assist system installed and will not be until above ACA's are incorporated.

Limitation: Fully automatic control not available.

* Description: Thermal Venting Relief Valve - Installation of (Ref. ACA 8-531, 8-13449, 8-16188NF)

Remarks: In case of pump flow control malfunctioning the hydraulic oil may heat up by working against the relief valve pressure. With this valve (VA 981-1) the relief valve will open at pre-determined oil temperature to protect the system.

Limitation: Land as soon as possible if primary or secondary system oil pressure indicator consistently shows above 3500 psi.

	Description:	Elevator Actuator Rod End Attachment-Revision to (Ref. ACA 8-649)
	Remarks:	This ACA increases length of bushings and chrome plates the attaching bolt to prevent galling between the elevon actuator rod end bearing inner race and the attaching bolt.
	Limitation:	Elevon Actuator Bearings should be lubricated after every 5 flight hours and rod end bearings inspected after every 10 hours of flight.
*	Description:	Radome Anti-Ice System (Ref. ACA 8-13828)
	Remarks:	Present anti-ice distribution ring found inadequate in tests.
	Limitation:	Reduced radar capability during icing conditions.
*	Description	Canopy Cinch-Down Actuating Mechanism-All Weather Protection. (Ref. ACA 8-14368 8-14838NF 8-14682 8-14839 8-14889NF 8-13605 8-14482 8-14846 8-15797 8-15389)
	Remarks:	With all weather seal installed on canopy, air spring counter-balance is revised to provide a pull-down force sufficiently to compress the seal and latch the canopy.
	Limitation:	Parked aircraft in rain must be protected against water leakage into cockpit.
	Description:	Take-Off Trim Position
	Part No:	CVAC UN 110-5
	Quantity:	One
	Remarks:	Interim substitution of elevator trim actuator ACTU 13-7 (Per TVA 41411 on Drawing 8-49346) for UN 110-5 imposes the following limitations.

Limitation: Until such time that interim ACTU 13-7 is replaced by UN 110-5, pilot must trim elevator from stick button to some position above 5 degrees UP before take-off trim circuit will function as designed.

NOTE: Elevator will not trim to 5 degrees UP position on take-off trim circuit if starting position is less than 5 degree up. Installation of UN 110-5 lifts the limitation.

Description: Ram Air Turbine - Extension of (Ref. ACA 8-15817)

Limitation: Existing Ram Air Turbine 44000 (TURB 15) should not be extended at speeds in excess of 200 knots I.A.S until replaced by new turbine 44068 (TURB 15-1).

Description: Wing Attach Bolts - Spar Six (Ref. ACA 8-16115 for approved bolts)

Part No: CVAC BOL 113-2 (8 pieces per airplane)

Remarks: Present airplanes have interim MS20010-34 type bolts installed.

Limitation: Until ACA 8-16115 is incorporated, the following limitations apply:

a. Symmetrical Maneuvers

   (1) Do not exceed normal load factor of 5.5g max.

b. Asymmetrical Maneuvers

   (1) Do not exceed normal load factor of 3.9g.
   (2) No roll rate restrictions for positive quadrant rolls. (90° either side of level flight).

   (3) For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half(1/2) of the maximum allowable aileron throw.

B. The following defines the subject aircraft instrumentation flight limitations.

1. Limitation: Forward Center Missile Launcher Inoperative

   Reference: TVA IN40947 against 8-54990

   Reason: Forward Center Missile Launcher removed to provide space for instrumentation equipment.

   NOTE: TVA IN42653 against 8-60644, Jumpers Launcher Switches to permit normal operation.

   TVA IN42532 against 8-80409 changes the restrictors in the pneumatic system to permit normal operation.

3. PART C "Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Department of Defense Form DD 250, Shipment No. 16176 consisting of sheets 1 through 89 inclusive."

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-029
DATE 31 Dec 1955
MODEL F-102A

TITLE
REPORT NO. ZD-8-029
DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF
F-102A AIRPLANE AF S/N 53-1800
CONTRACT AF33(600)-5942

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES 6
NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
A	12-21-55	WMG	Corrections & Changes	All

This report is prepared to define the condition of the aircraft as of factory completion for final acceptance by the Air Force.

PART A:

The following items are deviations from contractural requirements for Model F-102A Airplane, AF Serial No. 53-1800.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposal have been submitted to AMC but which have not been approved as of 8 December 1955, are as follows:

ECP NO. (CAC-F102-)	Title
1020	Landing Gear Warning System - Positive Warning
1022	Elevator - Change from 10° to 8° Down Surface Travel
1024	Cockpit Ground Air Conditioning - Change of
1031	Pratt & Whitney P-23 Engine Changes - Group II
1037	2" Rocket's - Installation of
1065	Oxygen Cylinder Bottle - Addition of
1068	Pratt & Whitney P-23 Engine Changes - Group III
1075	MM-2 Attitude Indicator - Interim Installation of
1087	Constand Speed Drive Oil System - Revision of

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 9 December 1955 but which have not been submitted as of that date are as follows (Paragraph numbers refer to those of Exhibits and Tables of the Contract):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	3-15-56
ZS-8-058	Control System Analysis	1-2-56

EXHIBIT "A": Paragraph (g)
Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbook to be replaced with regular Flight Handbook in March 1956.

3. Equipment listed in the "Equipment Approval Status Record", Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 15 November 1955.

4. PART A The following are shortages at time of factory completion. It is anticipated that these items will be reflected in the Air Force form 263 Part II. (EPD) Expected parts delivery date.

Quantity	Description	Part No.
1	Cooler Inst Eng Instl 8-22519 (GFAE Part No. 660599, Availability to be determined)	8-22957-7
1	Duct Eng Cool Air Instl 8-22714 (EPD 12-12-55)	DU 212-1 F1 23-5
1	Valve Recirc Oil Instl 8-22947 (EPD 12-15-55)	
6	Harn In Rkt Pkg Instl 8-54486 (EPD 12-16-55)	8-54486-904
1	Harn Elec Instl 8-61901 (EPD 2-1-56)	UN 110-2
1	Control Elev Trim Servo Instl 8-68190 (EPD 12-15-55)	UN 110-1
1	Harn Elec Instl 8-68966 (EPD 12-16-55)	8-49151
1	Trans Elev Trim Instl 8-49393 (EPD 12-15-55)	UN 110-3
1	Pitch "G" Limiter Instl 8-68155-1 (Vendor to Furnish EPD)	
1	Fuel Flow Joiner Instl ACA 8-708 Alternate Reg 150-2 Instld. (EPD 12-14-55)	Reg 150-3

		Quantity	Description	Part No.
4.	PART A (Cont.)	1	Fin Tip Instl. ACA 8-14520-1 Interim Tip Instld. (EPD 2-1-56)	8-14520-1
		1	Missile Intervalometer Instl. ECP 1034 (EPD 3-1-56)	UN 120
		1 Ea	Rocket Intervalometer Instl. ACA 8-12792 (EPD 1-2-56)	UN 66-2 REL 293
		2	Windshield Anti-Ice Circuit Instl. ACA 8-653 & 8-15469 (EPD 12-12-55)	TRA 294
		8	Wing Spar Fuselage Attach Bolts Instl. 8-10030 Sht. 1 Chg H (EPD Pending A. F. Approval)	MS 20010-34

4. PART B Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or the intended usage.

Description: Pilot Assist - Operation of
Part No: 1. Suitable Pitch "G" Limiter
2. Suitable Roll Coupling Limiter (Ref. ACA 8-754 and ACA 8-884)
Quantity: One each
Limitation: Item 2 must be flight tested prior to activation of Pilot Assist. Until Item 1 is installed, Pilot Assist. will be operated only with the following Elevator Limit Switch settings; + 2.3° above 15,000 feet or below M=0.6; ± 1.8° above M=0.6 at altitudes below 15,000 feet.

Description: Pitch and Yaw Damper operation
Part No: Suitable Pitch "G" Limiter
Quantity: One
Limitation: Without a Pitch "G" Limiter, Pitch Damper System shall not be used below 15,000 feet altitude.

4. PART B
(Cont'd)

Description: Fuel Flow Joiner (Ref. ACA 8-708)
Part No: CVAC REG 150-3
Quantity: One
Remarks: Provides fuel flow joiner in tank to engine fuel system to equalize the flow quantity-wise. This insures equal depletion from both sides and eliminates present necessity of pilot to maintain lateral balance with boost pump switch control.
Limitation: Until accomplished, pilot must monitor fuel quantity to maintain equal distribution.

Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15402)
Part No: CVAC FI 23-5
Quantity: One
Limitation: Until ACA 8-15402 is accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. power may occur.

Description: Fin Tip (Ref. Dwg. 8-14520 and ACA 8-13563)
Part No: 8-14520-1
Quantity: One
Remarks: Installed Interim Fin Tip (Any tip prior to Vendor Serial Number 20)
Limitation: Until 8-14520 Fin Tip (Vendor Serial No. 20 and on) is installed, this airplane is limited to a "G" loading of .80 design limit load.

Description: Missile Intervalometer Installation (Ref. ECP 1034)
Part No: CVAC UN 120 Intervalometer
Quantity: One
Limitation: Must be installed prior to firing Missiles of opening doors in the Missile Mode.

Description: Rocket Intervalometer Installation (Ref. ACA 8-12792)
Part No: 1. CVAC UN 66-2 Intervalometer
2. CVAC REL 293 Relay

4. PART B (Cont.)

Quantity: One each

Limitation: 1. Must be installed prior to firing rockets or opening doors in the rocket mode.
2. Until installed, there will be no remote control for Armament Bay Doors and Launchers. Extreme caution should be used if live arms are carried.

Description: Windshield Anti-ice Circuit - Add transformers, revise wire Gauges and Circuits, etc., to Increase Wattage on Nesa Glass (Ref. ACA 8-653 and 8-15496).
Part No: CVAC TRANS 294
Quantity: Two
Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the windshield free of ice.
Limitations: The airplane should not be flown in icing conditions until ACA 8-653 and 8-15496 have been incorporated, also, de-fog may not be provided under extreme conditions.

Description: Wing Spar Fuselage Attach. Bolts.
Remarks: Temporary load factor limitations as a result of installation of P/N MS 20010-34 wing spar fuselage attach. bolts (wing spar No. 6) until optimum bolt is approved.
Limitation: The airplane is temporarily limited to the following:

Symmetrical Maneuvers:

1. Normal load factor + 4.7g max.

Asymmetrical Maneuvers:

1. Normal load factor + 3.1g max.

2. Roll rate limited to 100°/sec. for changes in angle of bank of 100°.

3. Aileron angle is restricted to ± 3.3° (1/2 throw) for all speeds above 420 knots calibrated airspeed for altitudes below 12,000 feet.

4. PART C

Work tasks not accomplished on this airplane at time of final delivery shall be referenced in the Air Force Form 263C Part VI.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 31 December 1955.

6. List of items not proven to be interchangeable on this airplane at time of final acceptance on 22 December 1955:

Rudder Nose Door	8-15016-39 8-15016-41 8-15016-43
Wing Leading Edge Panel Assy	8-17230-27 8-17230-28 8-17230-29 8-17230-30 8-17330-31 8-17230-32 8-17230-33 8-17230-34 8-17230-35 8-17230-36
Wing Leading Edge Assy	8-17232-1 8-17232-2
Wing Leading Edge Assy	8-17233-1 8-17233-2
Wing Leading Edge Assy	8-17234-1 8-17234-2
Wing Leading Edge Assy	8-17235-1 8-17235-2
Wing Leading Edge Assy	8-17236-1 8-17236-2
Wing Tip Assy	8-17900-9 8-17900-10
Nose Radome Assy	8-70410
ATM Access Door Assy	8-72601-19
Electronic Purge Valve Inspection Door	8-73433-79
Tailcone Assy	8-73490
Mid-Electronic Door Assy	8-73608-25
Speed Brake Door Assy	8-73614-3 8-73614-4

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-030
DATE 31 Dec 1955
MODEL F-102A

TITLE
REPORT NO. ZD-8-030
DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS
FOR ACCEPTANCE OF
F-102A AIRPLANE AF S/N 53-1801
CONTRACT AF33(600)-5942

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES 8

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
A	12-27-55	WMG	Corrections & Changes	1,6,7

FORM 1813 A-4

This report is prepared to define the condition of the aircraft as of factory completion for final acceptance by the Air Forces.

PART A:

The following items are deviations from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1801.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposal have been submitted to AMC but which have not been approved as of 8 December 1955, are as follows:

ECP NO. (CAC-F102-)	Title
1020	Landing Gear Warning System - Positive Warning
1022	Elevator - Change from 10° to 8° Down Surface Travel
1024	Cockpit Ground Air Conditioning - Change of
1031	Pratt & Whitney P-23 Engine Changes - Group II
1037	2" Rockets - Installation of
1065	Oxygen Cylinder Bottle - Addition of
1068	Pratt & Whitney P-23 Engine Changes - Group III
1075	MM-2 Attitude Indicator - Interim Installation of

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 9 December 1955 but which have not been submitted as of that date are as follows (Paragraph numbers refer to those of Exhibits and Tables of the Contract):

EXHIBIT "A" : Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	3-15-56
ZS-8-058	Control System Analysis	1-2-56

EXHIBIT "A": Paragraph (g)
Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbook to be replaced with regular Flight Handbook in March 1956.

3. Equipment listed in the "Equipment Approval Status Record", Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 15 November 1955.

4. PART A The following are shortages at time of factory completion. It is anticipated that these items will be reflected in the Air Force form 263 Part II. (EPD) Expected Part Delivery Date.

Quantity	Description	Part No.
4	Cable & Link Installation 8-40530 Interim Part Instld, Vendor to establish (EPD)	Seal 175
1	Trans. Inst. Elev Trim Installation 8-49393 (EPD 2-1-56)	UN 110-2
1	Harn. Elec Installation 8-68966 (EPD 12-16-55)	UN 110-5
1	Line Main Fuel Installation 8-27401 (EPD 3-2-56)	Reg. 150-3
24	Ballast Inst. Installation 8-73000 (EPD 12-15-55)	8-54345
1	Duct Installation 8-28126 (EPD 12-16-55)	8-28128
pcs.	Duct Eng. Air Intake Installation 8-28126 (EPD 12-16-55)	
1	Switch L/H Installation 8-68327 (EPD 12-16-55)	IN 811-1
1	Trim and Feel Installation 8-49346 (EPD 12-15-55)	8-49380
1	Trans-Inst Elev Trim Installation 8-49393 (EPD 2-1-56)	UN-110-3
1	Armament Control Syst. Instl ACA 8-15249 (EPD 12-12-55)	LI 320

4. PART A
(Cont'd)

Quantity	Description	Part No.
1	Rocket Intervalometer Instl. ACA 8-12781 NF Interim UN 66-1 Installed (EPD 1-2-56)	UN 66-2
1	Missile Intervalometer Instl ECP 1034 & ACA 8-591 (EPD 3-1-56)	UN 120
2	Windshield Anti-Ice Circuit Instl. ACA 8-653 & 8-15496 (Vendor to Furnish EPD)	TRA 294
1	Take-Off Trim System Instl. ACA 8-500 Interim Part ACTU 13-7 Instld. (EPD 12-12-55)	UN 110-5
1	Constant Speed Oil Syst Instl ACA 8-15402 (EPD 12-12-55)	FI 23-5
1	Cooler Eng. Installation 8-22519-3 (EPD to be Determined)	8-22957-7 (GFAE Part No. 660599)
1 Ea	Constant Speed Drive Oil Syst. (EPD 1-5-56, FI 23-5) (EPD 2-15-56, GFAE Part)	FI 23-5 (GFAE 660599)
8	Wing Spar Fuselage Attach Bolts Instl. 8-10030, Sht 1, Chg H (EPD Pending A.F. Approval)	MS 20010-34
2 Ea.	Radome Anti-Icing System ACA 8-72968 (EPD 12-27-55)	AN 6230-B2 AN 6230-B3

4. PART A
Cont'd)

Quantity	Description	Part No.
1	Harn. Elec. Instl. Installation 8-68966	8-49151
1	Tube Pilots Compt Installation 8-80607	8-80607-189
1	Tube Aft Canopy Installation 8-80607	AN 6270-6
1	Duct Canopy Installation 8-89014	8-89407-1
4	Duct Canopy Installation 8-89014	AN 366- DF832
16	Floor Pilots Installation 8-70507	pieces
2	Pilots Flr Cir. Installation 8-70505	AN 365-428
2	Cross Channel Splice Installation 8-73551	8-73262
1 ea.	Cover Sta. 405.75 Installation 8-73994	8-73994-37 -40 -39 -41 -42 -43
1	Canopy Jett Sys. Installation 8-94117	MS 28741-5
1	Drive Constant Installation 8-27950	AN 8-6A
pcs.	Tube Sta. 490.85 Installation 8-49333	AN 3108- E 10S-2S
6	Harn. Rkt. Pkg. Installation 8-544486	8-54486-904
1	Filter Eng. Mt. Installation 8-22951	F1-212

Note: All shortages listed on this page will be available not later than 16 December 1955.

4. PART B Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane at noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

Description: Pilot Assist

Part No:

1. Suitable Pitch "G" Limiter
2. Suitable Roll Coupling Limiter (Ref. ACA 8-754 and ACA 8-884)
3. Side slip Transducer (Ref. ACA 15616)
4. Pote 17-6-1 (Ref. ACA 8-11864)

Quantity: One each items, 1, 2, and 3; item 4 (2)

Limitation: Items 3 and 4 must be installed prior to or concurrent with activation of Pilot Assist. Item 2 must be flight tested prior to activation of Pilot Assist. Until item 1 is installed, Pilot Assist will be operated only with the following elevator limit switch settings: ± 2.3° above 15,000 Ft. or below M=0.6; ± 1.0° above M=0.6 at altitudes below 15,000 ft.

Description: Armament Control System - Revision of (Ref. ACA 8-15249)

Part No: CVAC LI 320

Quantity: One

Remarks: Replaces mis-fire light with one that can be tested and dimmed.

Limitations: Missile mis-fire light cannot be tested.

Description: Pitch and Yaw Damper operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a Pitch "G" Limiter, Pitch Damper System shall not be used below 15,000 feet altitude.

4. PART B (Cont.)

Description: Missile Intervalometer Installation (Ref. ECP 1034 and ACA 8-591)
Part No: UN 120 Intervalometer
Quantity: One
Limitation: Must be installed prior to firing missiles of opening doors in flight in the missile mode.

Description: Windshield Anti-ice Circuit - Add transformers, change wire gauges, revise circuits, etc., to increase wattage on nesa glass. (Ref. ACA 8-653 and 8-15496)
Part No: CVAC Trans 294
Quantity: Two
Remarks: Under icing conditions, the De-fog Circuit will not supply sufficient wattage to keep the windshield free of ice.
Limitation: The airplane should not be flown in icing conditions until ACA 8-653 and 8-15496 have been incorporated. Also, de-fog may not be provided under extreme conditions.

Description: Wing Spar Fuselage Attach. Bolts.
Remarks: Temporary load factor limitations as a result of installation of P/N MS 20010-34 wing spar fuselage attach. bolts (wing spar No. 6) until optimum bolt is approved.
Limitation: The airplane is temporarily limited to the following:

Symmetrical Maneuvers

1. Normal load factor + 4.7g maximum.

Asymmetrical Maneuvers

1. Normal load factor + 3.1g maximum.
2. Roll rate limited to 100°/sec. for changes in angle of bank of 100°.
3. Aileron angle is restricted to ± 3.3° (1/2 throw) for all speeds above 420 knots calibrated airspeed for altitudes below 12,000 feet.

Description: Radome Anti-Ice System ACA-8-72968
Remarks: Present Anti-Ice distribution ring found inadequate in tests.
Limitation: Reduced radar capability during icing conditions.

4. PART B (Cont.)

Description:	Rocket Intervalometer Install (Ref. ACA 8-12781 NF)
Part No:	UN 66-2 Intervalometer
Quantity:	One
Limitation:	UN 66-1 is temporarily installed in this airplane in lieu of UN 66-2. Substitution of UN 66-1 for UN 66-2 is acceptable for firing except UN 66-1 is not designed for 14 volt operation. Do not attempt to operate armament system on emergency D. C. power.

Note: Either UN 66-1 or UN 66-2 must be installed prior to firing rockets or opening doors in flight in the rocket mode.

4. PART B (Cont'd)

Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15402)

Part No: CVAC FI 23-5, GFAE Valve 660599

Quantity: One each

Limitation: Until ACA 8-15402 is accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. power may occur.

Description: Take-off Trim Position (Ref. Differential Linkage Installation ACA 8-500)

Part No: CVAC UN 110-5

Quantity: One

Remarks: Interim substitution of elevator trim actuator ACTU 13-7 (Per TVA 41411 on Dwg. 8-49346) for UN 110-5 imposes the following limitation.

Limitation: Until such time that interim ACTU 13-7 is replaced by UN 110-5, pilot must trim elevator from stick button to some position above 5 degrees UP before take-off trim circuit will function as designed.

Note: Elevator will not trim to 5 degrees UP position on take-off trim circuit if starting position is less than 5 degrees up. Installation of UN 110-5 lifts the limitation.

4. PART C

Work tasks not accomplished on this airplane at time of final delivery shall be referenced in the Air Force Form 263C Part VI.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 31 December 1955.

6. List of items not proven to be interchangeable on this airplane at time of final acceptance on 22 December 1955:

Rudder Nose Door	8-15016-39 8-15016-41 8-15016-43
Wing Leading Edge Panel Assy	8-17230-27 8-17230-28 8-17230-29 8-17230-30 8-17330-31 8-17230-32 8-17230-33 8-17230-34 8-17230-35 8-17230-36
Wing Leading Edge Assy	8-17232-1 8-17232-2
Wing Leading Edge Assy	8-17233-1 8-17233-2
Wing Leading Edge Assy	8-17234-1 8-17234-2
Wing Leading Edge Assy	8-17235-1 8-17235-2
Wing Leading Edge Assy	8-17236-1 8-17236-2
Wing Tip Assy	8-17900-9 8-17900-10
Nose Radome Assy	8-70410
ATM Access Door Assy	8-72601-19
Electronic Purge Valve Inspection Door	8-73433-79
Tailcone Assy	8-73490
Mid-Electronic Door Assy	8-73608-25
Speed Brake Door Assy	8-73614-3 8-73614-4

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-031
DATE 30 Sept 1955
MODEL F-102A

TITLE
REPORT NO. ZD-8-031

DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102 AIRPLANE AF S/N 53-1802

CONTRACT AF33(600)-5942

PREPARED BY ____________________
GROUP Project Specifications
REFERENCE ____________________
CHECKED BY ____________________
APPROVED BY ____________________

NO. OF PAGES __________
NO. OF DIAGRAMS __________

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

FORM 1812 A-4

This report is prepared to define the condition of the aircraft as of factory completion for final acceptance by the Air Force.

PART I:

The following items are deviations from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1802.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 30 September 1955, are as follows:

ECP No. (CAC-F102-)	Title
1029	Mooring Eye Bolts and Jack Pads - Deletion of
1069	Negative "G" Valve - Deletion of

2. Engineering data listed in exhibit of the contract which were required to be submitted prior to 31 September 1955, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract exhibit):

Report No.	Title
ZS-8-054	Armament Loads
Remarks:	Reason for non-submittal; Motions load data not available at this time, due to enadequate flight test corrallation of reac and test stand loads.
ZS-8-059	Armament Analysis
Remarks:	(Same as ZS-8-054 above) Anticipated submittal date 15 November 1955.

3. Equipment listed in Equipment Qualification Approval Status Report, Report No..ZM-8-091 dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 31 September 1955.

4. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have not been approved as of 31 September 1955.

NOTE: It is anticipated that Items 3 and 4 will be revised on 1 December 1955 and each month thereafter.

5. PART A The following are shortages at time of factory completion It is anticipated that these items will be reflected in the Air Force Form 263C Part 2.

Quantity	Description	Part No..
4	Seal - Cable & Link Instl. 8-40530	Seal 175
2	Bracket - Elevon Instl. 8-49548	8-49551 8-49552
2	Aft Barrel Instl. 8-81017-903-904	POTE 103-1
1	Gyro Instl. 8-68159	UN 36-28
1	Equipment Instl. - Limiter Instl. 8-67186	UN 66-2
1	Pitch "G" Limiter Instl. 8-68155	UN 100
1	Elevon Trim Control Instl. 8-68190	UN 110-1
1	Transducer - Elevon Trim Instl. 8-49393	UN 110-3
1	Equipment Instl. - Intervelometer Instl. 8-67186	UN 120
1	Duct - Anti Ice Instl. 8-87048	VA 1072
1 each	Elevon - Valves Instl. 8-81045	VA 1056 VA 105661
1	Refrigeration - Harness Instl. 8-67611	HARN 8-67611
1 each	Curtain Assy's Instl 8-64122	8-62272 8-62272-1 8-62272-3 8-62272-5

5. PART B Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or the intended usage.

Description: Anti-Icing - Engine Duct Lips (Ref. ACA 8-13569) TVA 40578 "A"
Part No: VA 1072
Quantity: One
Remarks: Valve is replaced by solid plug in duct valve making anti-icing of engine duct lips inoperable.
Limitation: All-weather operations should not be planned until valve VA 1072 is installed.

Description: Pilot Assist (Ref. ACA 8-724 & ACA 8-11864)
Part No: UN 100, UN 36-29, POTE 17-6
Quantity: One each UN100, UN36-29 and POTE 17-6
Remarks: Pilot assist system shall not be used unless above items are installed. (UN 100 installed by original design release)

Description: Pitch Damper System - ACA 8-10851 (Amend)
Part No: UN 100
Quantity: One each
Remarks: Pitch damper system shall not be used below 15,000 ft. until UN 100 is installed.

Description: Trim Servo and Speed Brake (Ref. ACA 8-740)
Part No: UN 110-1, UN 110-2, UN 110-3, UN 110-5
Quantity: One each
Remarks: There will be no automatic elevator deflection to compensate for pitching effect from speed brake extension and no automatic trim for unstable stick forces until above units are installed.

Description: Missile Intervalometer Install. (Ref. ECP 1034 and ACA 8-591)
Part No: UN 120 Intervalometer
Quantity: One
Remarks: Must be installed prior to firing more than one missile at a time.

Description: Rocket Intervalometer Install. (Ref. TVA #42000)
Part No: UN 66-2 Intervalometer
Quantity: One
Remarks: Substitution of UN 66-1 for UN 66-2 is acceptable for firing except CVAC UN66-1 is not designed for 14 volt operation. Do not attempt to operate armament system on emergency D.C. power.

5. PART B (Cont)

Description: ACA 8-653 - Windshield De-fog Circuit, Add transformers, change wire guages, revise circuits, etc., to increase wattage on Nesa glass

Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep windshield free of ice.

Limitation: The airplane should not be flown in icing conditions until ACA 8-653 has been incorporated. Also defog may not be provided under extreme conditions.

Description: ACA 8-649 - Elevon Actuator Rod End Attachment - Revision to

Remarks: This ACA increases length of bushings and chrome plates the attaching bolt to prevent galling action between the elevon actuator rod end bearing inner race and the attaching bolt.

Limitation: Elevon actuator bearings should be lubricated after every 5 flight hours and rod end bearings inspected after every 10 hours of flight.

Description: ACA 8-617 - ElectricalReceptacle, Forward Fuel Cell - Revision of

Remarks: Provides seal at forward fuel cell electrical receptacle.

Limitation: Must be accomplished before missile and/or rocket firing to prevent missile dust from entering area between wing and fuselage, thus causing corrosion.

Description: ACA 8-531 and ACA 8-13449 - Hydraulic system relief valve - Addition of Thermal Venting

Part No: VA 981-1 Valve

Quantity: Two each

Remarks: In case of pump flow control malfunctioning the Hydraulic oil may heat up by working against the relief valve pressure. With this valve (VA 981-1) the relief valve will open at predetermined oil temperature to protect the system.

Limitation: Land as soon as possible if primary or secondary system oil pressure indicator consistently shown above 3500 psi.

5. PART B (Cont)

Description: ACA 8-716 Relief Valve Install. - Mid-Electronic Compt.

Quantity: One each

Part No: 8-89148 valve assembly

Remarks: This relief is installed to control internal fuselage pressure in the nose wheel and forward electronic area.

Limitation: (1) This change must be incorporated before missile and/or rocket firing.
(2) Do not operate aircraft above 50,000 ft. with electronic equipment installed.

Description: Restrictor Valves - Armament Launchers (Ref. ACA 8-14279NF)

Part No: CVAC VA 691-12, CVAC REST 26-1

Quantity: 12 each

Remarks: Incorporation of ACA 8-14279NF provides an acceptable but slow acting system. Incorporation of ACA 8-722 provides a fast acting system in compliance with airplane specifications and also will remove the limitation.

Limitation: Until restrictor valves (ACA 8-14279NF) are installed, launchers shall not be operated. Operation without restrictors could cause structural damage. Incorporation of the fast acting system (ACA 8-722) will also lift the limitation.

Description: (ACA 8-14285) Actuator Installation - Autopilot, Elevon

Part No: And Quantity: 8-81018-33-35 Brackets, 2 each
8-81018-37 Bracket (4), AN 520-10R28 Screw (4), AN4-14A Bolt (4), and AN 365 1032 Nut (8)

Remarks: Incorporation of ACA 8-14285 prevents excessive rotation of servo-actuator yoke when pulling "g" maneuvers.

Limitation: ACA 8-14285 must be incorporated prior to activating pilot assist system (ACA 8-724 and 8-523) to insure proper operation of lockout valve manual override switch.

5. PART B (Cont)

The following limitation, though not due to parts shortage, should also be noted.

Description: Mid-Electronics Door (Data Link Antenna Installation)

Remarks: A satisfactory UHF Data Link antenna has not been developed for incorporation in the mid-electronics door. A similar door deleting the antenna installation has been installed. No limitations are imposed on the aircraft until the MG-10 - Data Link installations are made.

Description: MG-3 Tactical Operation Alignment

Remarks: Due to Air Force request to expedite this aircraft to a September delivery ahead of its scheduled October date, in order to utilize a 1 October open date in the climatic hanger at Eglin Air Force Base, the following work task omissions are requested.

1. MG-3 will be installed and post installation checks made to assure functional operation but the system will not be aligned for tactical operation.
2. After completion of climatic hanger tests or at a convenient available date, alignment for tactical operation of the MG-3 system will be made.

Limitation: The MG-3 system shall be considered inoperable for tactical use until the alignment procedures are accomplished.

Description: ECP #1057 Oxygen System - Change to Liquid Supply.

Remarks: ECP #1057 incorporates a liquid oxygen system providing a greater capacity. ECP #1065 is an interim change adding one (1) more bottle to the existing system. Use of present pressure helmet results in greater oxygen consumption.

Limitation: Until ECP #1057 or #1065 has been incorporated, pilots must be cognizant that the oxygen supply could be exhausted before running short of engine fuel. WARNING - oxygen quantity should be checked periodically during flight.

5. PART B (Cont)

Description: Electronic Compart - Ground Cooling (Ref. ACA 8-699).
Part No: VA 931-2, 8-87146 Duct, 8-89119-1 Duct, 8-89231 Duct
Quantity: One each
Remarks: Present system provides insufficient electronic ground cooling as revealed by flight test.
Limitation: Electronic Equipment cannot be operated on ground during high ambient conditions (Approximately 120°F) until ACA 8-699 has been incorporated.

Description: ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.
Part No: MS 20010-34 (8 pieces per airplane)
Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.
Limitation:

a. Symmetrical Maneuvers - Do not exceed normal load factor of 5.5 maximum.
b. Asymmetrical Maneuvers -
    1. Do not exceed normal load factor of 3.9g maximum.
    2. Do not exceed change in bank angle of 100° maximum.
    3. Do not exceed roll rate of 100°/sec. maximum.
    4. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

5. PART B (Cont)

Limitations due to instrumentation requirements are as follows:

Description: TVA IN 33840 on 8-00043. Pitot Heater Wiring deletion of, TVA IN 38586 on 8-72968. Production Pitot Probe - Substitution of

Remarks: Instrumentation installation necessitates the substitution of Pitot Probes. Instrumentation probe has no provisions for heating.

Limitation: No Pitot heater operation until TVA IN 38586 and IN 33840 have been recinded.

Description: Insulating Blankets - Center Missile Bay

Remarks: During certain phases of the test program on this airplane, insulating blankets will be installed in the center missile bays to protect recording equipment.

Limitation: Until such time that TVA #IN 40270 on 8-54990 has been recinded, pilot should make certain before each flight in which missile doors may be opened, that the blankets are not installed.

Missile bay doord must not be opened in flight with insulating blankets installed.

Description: TVA #IN 40270 on 8-54990. Center Missile Bay Launchers - Deletion of -

Remarks: Center missile bay launchers have been removed to provide room for recording equipment.

Limitation: Center missile bay armament system inoperative until TVA #IN 40270 has been recinded.

5. PART C

The following presently unaccomplished items are deisgn deficiencies resulting from development and flight test evualuation which deviate from the contract and detail specification requirement. Until these items are incorporated, the following limitations and/or descrepancies must be observed.

Description: Differential Linkage - Elevator System
Ref. ACA's 8-500 8-14623 8-14626 8-14647
Remarks: Elevator Controls are considered too sensitive.
Limitation: Precise flying in certain regimes difficult, thereby affecting phase VI and VII evaluation.

Description: Elevator Stick Forces
Ref. ACA 8-700, 8-645
Remarks: Stick forces are approximately 50% too high. A spring of lower rate will be incorporated in the elevator feel cylinder to reduce take-off and landing forces. Also the "Q" intelliigence unit will be revised to lower the in-flight feel forces.
Limitation: None - More pilot effort to perform maneuvers.

Description: Control Stick - Increase in Length
Ref. ACA 8-702, 8-14187
Remarks: Stick is considered too short.
Limitation: At high seat adjustment it is difficult to obtain full aileron throw with the double yoke grip.

Description: Pilot Assist System.
Ref: ACA 8-763 8-14827 8-10933
8-768 8-760 8-14629
8-11864 8-14296 8-724
8-764 8-762 8-777
8-14574 8-763 8-757
8-14196 8-814 8-13802
8-810 8-14579 8-834
Remarks: At present there is no pilot assist system installed.. Major items not satisfactorily resolved was Pitch limiting and follow up system and pitch attitude control.
Limitation: Fully automatic control not available.

5. PART C (Cont)

Description: Pitch and Yaw Damper System
Ref: ACA's 8-768 8-777 8-13802
8-764 8-757 8-14574
8-14827 8-834 8-14196
8-763 8-14629 8-14579
8-814 8-11864 8-810
8-10933

Remarks: The reliability and functions of the existing system is sub marginal without incorporating the known improvements. Until a satisfactorily Pitch "G" Limiting system is developed the following limitations listed below will still exist.

Limitation: Pitch Damper System shall not be used below 15,000 feet.

Description Landing Gear Position and Warning Circuit
ECP 1020 and ACA's 8-14475 8-14383
8-14476

Remarks: Present Landing Gear Warning System will operate at all altitudes. New system includes altitude and air speed switch and will operate warning system only when air speed is below 250 knots and altitude is less than 10,000 feet.

Limitation: None

Description: Nose Wheel Well Curtains
Ref: ACA 8-696

Remarks: Existing curtains pulled loose at high landing speeds.

Limitation: Possible for snow, ice and debris to enter Nose Wheel Well until adequate curtains are installed

Description: Armament Control System
ECP 1033 ACA's 8-783 8-14771
8-766 8-14769
8-14680 8-14817
8-14707 8-769
8-14772

Remarks: Design improvement to relocate reset switches and remote control disconnect to L.H. wheel well and add door rocket grounding receptacle to reduce hazard for ground personnel. Also revising armament control system to prevent inadvertent and/or "Out-of-sequence door and launcher operation. Make provision for testing and automatic dimming of missile mis-fire light.

5. PART C (Cont)

Limitation: No mis-fire light dimming provision. Extra precautions should be taken by ground personnel to follow instructions issued.

Description: Two Second Chute Deployment
ACA 8-808
Remarks: Contractor working with chute vendor to provide a two second deployment chute.
Limitation: None.

Description: Radome Anti-Ice System
ACA 8-13828
Remarks: Present Anti-Ice destribution ring found inadequate in tests.
Limitation: Reduces radar capability during icing conditions.

Description: Air Conditioning - Ground Operation
ACA's 8-689, 8-688, 8-809, 8-699.
Remarks: Insufficient air flow to cockpit when using ground air conditioning equipment. Addition of jet pump for cooling electronic equipment permits usage of refrigeration package air for cooling cockpit. In addition, ACA 8-809 provides for quarter open canopy for cockpit comfort during ground maneuvering.
Limitation: Uncomfortable cockpit during extended operation on the ground during extreme ambient conditions.

Description: Boundary Layer Bleed Duct - Manifolding of ACA's 8-796, 8-14301.
Remarks:q Vibration encountered at high speed when ram air valve is closed. Correction is accomplished by manifolding left and right hand boundary layer bleed ducts together to provide continuous flow. ACA 8-14301 is an interim fix.
Limitation: If interim fix ACA 8-14301 has not been incorporated, possibility of vibration at speeds above 350 knots if ram air valve malfunctions or is intentionally closed during missile firing.

Description: Canopy De-Fog.
ECP 1001, ECP 1076, ACA's 8-14588, 8-14508, 8-14509.
Remarks: Stretched, tinted and electrically de-fogged glass not available, but corrective action provides for ship wiring to accommodate Nesa glass when available. ECP 1076 is an interim fix providing hot air canopy de-fog.

5. PART C (Cont)

Limitation: Without one or the other fix installed, flight visibility under certain conditions is reduced.

Description: Main Intake Duct Leading Edge Anti-Icing ACA's 8-634,
Remarks: Initial design and fabrication render anti-icing leading edge marginal.
Limitation: No operation in heavy icing conditions.

Description: Speed brake effectiveness ACA 8-812
Remarks: It appears desirable to increase size of speed brakes for greater effectiveness.
Limitation: None

Description: High level of vibration and noise (Buzz). ACA 8-813
Remarks: Due to boundary layer separation ahead of the main engine air inlet ducts the above buzz conditions prevail.
Limitation: None (Condition imposes its own limitations due to severity at M1.3).

Description: 2" DIA. Rocket Installation ECP 1037, ACA's 8-786, 8-820.
Remarks: Request by the Customer to go to 2" DIA rockets. These changes provide for interim installation of a total of 24 rockets in the doors. Further installation of a total of 36 rockets for the doors will be as provided and scheduled by ECP 1037.
Limitation: None.

Description: Launcher System Snumming ACA 8-648.
Remarks: It is possible to operate system by ground crew without snubbing pressure in the cylinder. Correction adds restrictor valves between selector valves and pressure switches.
Limitation: Until corrective action has been taken mechanic must select correct valve position prior to pressurizing system.

Description: One second Armament Launcher Extension ACA 8-722
Remarks: The present system installed gives four second extension. This change will reduce the extension time to one second.

5. PART C (Cont)

Limitation: Reduced "Kill Probability".

Description: Nose Landing Gear Door Cylinder ACA 8-797.
Remarks: Uplock mechanism design recently discovered to be marginal. Failure to lock in up position may occur after relatively short service life. New cylinder design corrects this deficiency.
Limitation: None. If cylinder fails to up-lock, unsafe gear warning light will notify pilot.

Description: Improved Fuel System Ref.. ACA 8-708, 8-795.
Remarks: Provides fuel flow joiner in tank to engine fuel system to equalize the flow quantity-wise. This insures equal depletion from both sides and eliminates present necessity of pilot to maintain lateral balance with boost pump switch control. Also, provides twin boost p pump installation to pick up fuel in all attitudes of flight, thus decreasing amount of unusable fuel.
Limitation: Until accomplished pilot must monitor fuel quantity to maintain equal distribution. Also, until twin boost pumps are installed, alternate dives and climbs and similar maneuvers with low fuel quantity is restricted as provided for in handbooks.

Description: Fuel Tank Negative "G" Vent Valve (Ref. ACA

8-14601	8-707
8-14398	8-14600
8-14603	8-14403
8-14514	8-14397

Remarks: At present fuel will tend to vent overboard during maneuvers of less than one "g" positive. This is considered undesirable, especially if armament is fired at same time.
Limitation: None. Until accomplished solenoid valve is presently installed which shuts off fuel vent valve when missile bay doors are opened.

Description: Articulated Engine Inlet Fuel Line ACA 8-738
Remarks: An additional flexible coupling in the fuselage-engine fuel line is considered desirable by the operating agency as a result of the CTCI Board.
Limitation: None.

5. PART C (Cont)

Description: J-57 Engine installation
Ref: ECP's 1002, 1014, 1031, 1068.

Remarks: Customer request Contractor to install P-23 Type engine in certain aircraft of which 53-1802 (8-10 # 12) is one, and in addition incorporate Pratt & Whitney changes for better performance and maintenance.

Limitation: P-41 engines not sufficient to perform Phase VI and VII testing.

Description: Canopy Cinch-Down Actuating Mechanism - All Weather Protection - ACA 8-14482, 8-14682.

Remarks: With all-weather zeal installed on canopy, air spring counter-balance is revised to provide a pull-down force sufficiently to compress the seal and latch the canopy.

Limitation: Parked A/C in rain must be protected against water leakage into cockpit.

Description: Roll Rate Limiter
ACA 8-754

Remarks: This change provides a warning to the Pilot when he excedes a dangerous roll rate by applying high lateral stick forces to return stick to neutral.

Limitation: Roll Rate is limited to 100°/per for changes in angle of bank of 90°. See safety Supplement D.

Description: Replace J-8 Attitude Gyro with MM-2 Attitude Indicator ECP 1075, ACA 8-14615,

Remarks: The J-8 Attitude Gyro is not reliable and is being changed at Customer request.

Limitation: None.

6. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 30 September 1955.

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-032
DATE 27 FEB 1956
MODEL F-102A

REPORT NO. ZD-8-032
TITLE

DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANES AF S/N 53-1814, 53-1815, 53-1816, 54-1371, 54-1372, 54-1373, 54-1374, 54-1375, 54-1376, 54-1377, 54-1378, 54-1379. CONTRACT AF33(600)-5942, -23903.

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF ~~PAGES~~ PARTS XII

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
"A"	3-9-56	DDF	Revised & Rewritten	All

FORM 1812A-4

This report is prepared to define the condition of these airplanes as of factory completion for acceptance by the Air Force.

Waivers for the following airplanes are contained in their respective part as noted.

A/C Serial Number	PART
53-1814	PART I
53-1815	PART II
53-1816	PART III
54-1371	PART IV
54-1372	PART V
54-1373	PART VI
54-1374	PART VII
54-1375	PART VIII
54-1376	PART IX
54-1377	PART X
54-1378	PART XI
54-1379	PART XII

ANALYSIS
PREPARED BY
CHECKED BY
REVISED BY "A"

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

A/C Ser. No. 53-1814
PAGE 1
REPORT NO. ZD-8-032
MODEL F-102A
DATE 27 Feb 56

REPORT NO. ZD-8-032

PART I

WAIVERS FOR AIRPLANE
SERIAL NO. 53-1814

FORM 1818-A

		VALID	CANC.
	The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 53-1814.		
1.	Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 27 February 1956, are as follows:		
ECP No. (CAC-F-102)	Title		
$233R_1$	Finish Requirements - Change of:		
$1010R_1$	Main Landing Gear Skewed Axis - Change to:		
1024	Cockpit Ground Air Conditioning - Change of:		
1037	2" Rockets - Installation of:		
1068	Pratt & Whitney P-23 Engine Changes - Group III		
1076	Interim Installation of Canopy De-Fog		
2.	Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 27 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables): EXHIBIT "A": Paragraph (b) Stress Analysis		
	Report No. — Title — Anticipated Scheduled Date		
	ZS-8-054 — Armanent Loads — 4-15-56		
3.	Deleted		

VALID CANC.

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force Form 263, Part II. Some of the following shortage items impose certain limitations on this airplane; these limitations are defined in 4 PART B of this report.

Dates shown as expected parts delivered (EPD) are parts availability date and do not constitute date of installation in airplane.

Items denoted by circles opposite parts short refer to corresponding Limitations in Paragraph 4, Part B.

CONTRACTOR FURNISHED EQUIPMENT

Quantity		Description	Part No.	VALID	CANC.
8	ⓑ	Bolt, Wing Attach - Spar No. 6 (8 per airplane) (EPD - Available)	BOL-113-2		
1	ⓒ	Intervalometer - Rocket Equip., Inst. - Instl. Dwg. 8-67186 (EPD 3-31-56)	UN-66-2		
1	ⓓ	Intervalometer - Missle Equip., Inst. - Inst. Dwg. 8-67186 (EPD 3-31-56)	UN-120		

GOVERNMENT FURNISHED AIRCRAFT EQUIPMENT

Quantity		Description	Part No.	VALID	CANC.
1	ⓐ	Valve, Recirculating Oil Instl. 8-22947 GFAE Part No. 660599 (EPD 4-1-56)	8-22947-7		

4. PART B Shortages as listed in Air Force Form 263c, which affects the performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

Refer to corresponding shortages listed in Paragraph 4 - Part A, Items denoted by circle.

4. PART B (Cont.)

VALID CANC.

1. Description: Pilot Assist - Operation of (ACA 8-16862, 8-17186, TVA 46117 Change "D" on Dwg. 8-60755 and TVA 46539 on Dwg. 8-60010).

Limitation:

1. Pilot assist is deactivated until the above mentioned ACA's and TVA's are accomplished.
2. Upon activation of pilot assist by incorporation of the above ACA's and TVA's, pilot assist is restricted to altitude above 25,000 feet at indicated air speeds below 360 knots.

Note: Elevator limit switches must be set at ±2.3°.

---

2. Description: Roll Maneuver Limitations

Limitation: The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
   - a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight)
   - b. Do not exceed 80° per second for 360° rolls.
   - c. Uncoordinated maneuvers are prohibited.

4. PART B (Cont.)

VALID CANC.

2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.

---

3. Description: Pitch and Yaw Damper Operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a pitch "G" Limiter, pitch damper system shall not be used below 12,000 feet altitude at speeds above 480 knots.

---

4. Description: Trim Servo - Operation of

Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.

Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.

---

5. Description: Buzz Fix - High Speed (Ref. ACA 8-813)

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

ANALYSIS
PREPARED BY
CHECKED BY
REVISED BY "A"

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

A/C Ser. No. 53-1814
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MODEL F-102A
DATE 27 Feb 56

	VALID	CANC.
4. PART B (Cont.) Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.		
6. Description: ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type. (b) Part No: MS 20010-34 (8 pieces per airplane) Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations: Limitation: a. Symmetrical Maneuvers Do not exceed normal load factor of 5.5g maximum. b. Asymmetrical Maneuvers 1. Do not exceed normal load factor of 3.9g. 2. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight). 3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.		

4. PART B (Cont.)

VALID CANC.

7. Description: ⓐ	Constant Speed Drive - Oil System for (Ref. ACA-8-15401, 8-15709, 8-16070).
Part No:	GFAE #660599
Quantity:	One
Limitation:	Until the above ACA's are accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. power may occur.

---

8. Description:	Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)
Remarks:	TVA 38104A against drawing 8-60674 de-activates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.
Reason:	Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.
Limitation:	No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.
Note:	This system inoperative until switch 644 is incorporated. (Switch 644 EPD-3-30-56)

	VALID	CANC.
4. PART B (Cont) 9. Description: Rain Clearing System (Ref. ACA 8-954) Remarks: Hot air blast shield protects vinyl edge of windshield. Limitation: Rain clearing system should not be used until ACA 8-954 has been incorporated.		

4. PART B (Cont.)

	VALID	CANC.
10. Description: Windshield Anti-Ice System (Ref. ACA 8-17623) Remarks: Since procurement of Control box CONT-178-1, it has become apparent that the addition of 2 power relays are necessary to handle increased load. Failure of contacts in the control box due to excessive electrical load, causes power to remain on windshield resulting in glass failure. Limitation: Do not fly in icing conditions. Note: Transformer has been by-passed by TVA 47554 on Dwg. 8-60652 permitting limited de-fog but no anti-ice.		
11. Description: Rocket Intervalometer Installation (Ref. ACA 8-12781 NF) ⓒ Part No: CVAC UN66-2 Intervalometer Quantity: One Limitation: Must be installed prior to firing rockets or opening doors in the rocket mode.		
12. Description: Missile Intervalometer Installation (Ref: ECP 1034) ⓓ Part No: CVAC UN120 Intervalometer Quantity: One Limitation: Must be installed prior to firing missiles or opening doors in the missile mode.		
4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263c, Part II.		

5. Deleted.

6. Deleted.

ANALYSIS
PREPARED BY
CHECKED BY
REVISED BY "A"

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

A/C Ser No. 53-1815
PAGE 1
REPORT NO. ZD-8-032
MODEL F-102A
DATE 2-27-56

REPORT NO. ZD-8-032

PART II

WAIVERS FOR AIRPLANE
SERIAL NO. 53-1815

FORM 1812-A

VALID | CANC.

The following items are deviations from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1815.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 27 February 1956, are as follows:

ECP No. (CAC-F-102-)	Title	VALID	CANC.
233R$_1$	Finish Requirements - Change of		
1010R$_1$	Main Landing Gear Skewed Axis - Change to		
1024	Cockpit Ground Air Conditioning - Change to		
1037	2" Rockets - Installation of		
1068	Pratt & Whitney P-23 Engine Changes - Group III		
1076	Interim Installation of Canopy Defog		

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 27 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armanent Loads	4-15-56

3. Deleted.

VALID CANC.

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force Form 263, Part II. Some of the following shortage items impose certain limitations on this airplane; these limitations are defined in 4 Part B of this neport.

Dates shown as expected parts delivered (EPD) are parts availability date and do not constitute date of installation into airplane.

Items denoted by circle opposite parts short refer to corresponding Limitations in Paragraph 4. Part B.

CONTRACTOR FURNISHED EQUIPMENT

Quantity	Description	Part No.	VALID	CANC.
8 ⓑ	Bolt, Wing Attach - Spar No. 6 (8 per airplane) (EPD - Available)	BOL-113-2		
1 ⓒ	Intervalometer - Rocket Equip. Inst. - Instl. Dwg. 8-67186 (EPD 3-31-56)	UN-66-2		
1 ⓓ	Intervalometer - Missile Equip. Inst. - Inst. Dwg. 8-67186 (EPD 3-31-56)	UN-120		

GOVERNMENT FURNISHED AIRCRAFT EQUIPMENT

Quantity	Description	Part No.	VALID	CANC.
1 ⓐ	Valve Recirculation Oil Instl. 8-22947 GFAE Part No. 660599 (EPD 4-1-56)	8-22947-7		

4. PART B Shortages as listed in Air Force Form 263c, which affects the performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

Refer to corresponding shortages listed in Paragraph 4, Part A, items denoted by circles.

4. PART B (Cont.)

VALID CANC.

1. Description: Pilot Assist - Operation of (ACA 8-16862, 8-17186, TVA 46117 Change "D" on Dwg 8-60755 and TVA 46539 on Dwg 8-600102.

Limitation:

1. Pilot assist is deactivated until the above mentioned ACA's and TVA's are accomplished.
2. Upon activation of pilot assist by incorporation of the above ACA's and TVA's, pilot assist is restricted to altitude above 25,000 feet at indicated air speeds above 360 knots.

Note: Elevator limit switches must be set at 2.3°.

2. Description: Roll Maneuver Limitations.

Limitation: The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
   a. No roll rate restrictions for positive quadrant rolls (60° either side of level flight)
   b. Do not exceed 80° per second for 360° rolls.
   c. Uncoordinated maneuvers are prohibited.
2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.

VALID CANC.

4. PART B (Cont.)

3. Description: Pitch and Yaw Damper Operation

Part No: Suitable Pitch "G" Limiter

Quantity: One.

Limitation: Without a pitch "G" limiter, pitch damper system shall not be used below 12,000 feet altitude at speeds above 480 knots.

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4. Description: Trim Servo - Operation of.

Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.

Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.

---

5. Description: Buzz Fix - High Speed.
Ref. ACA 8-813.

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

Limitations: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

---

6. Description: ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.

⑥

Part No: MS 20010-34 (8 pieces per airplane)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations:

VALID CANC

4 PART B (Cont)

6. Limitation: a. Symmetrical Maneuvers

So not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers

1. Do not exceed normal load factor of 3.9g.
2. No roll rate restrictions for positive quadrant rolls.
3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

---

7. Description: Constant Speed Drive - Oil System for (Ref ACA 8-15401, 8-15709, 8-16070)

@

Part NO: GFAE #660599

Quantity: One

Limitation: Until the above ACA's are accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of a-c power may occur.

---

8. Description: Electronic Equipment - Ground cooling of (Ref ACA 8-699, 8-1006)

Remarks: TVA 38104A against drawing 8-60674 deactivates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

4. PART B (Cont)			VALID	CANC.
8.	Reason:	Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.		
	Limitation:	No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.		
		Note: This system inoperative until switch 644 is incorporated. (Switch 644 EPD-3-30-56).		
9.	Description:	Rain Clearing System. (Ref: ACA 8-954)		
	Remarks:	Hot air blast shield protects vinyl edge of windshield.		
	Limitation:	Rain clearing system should not be used until ACA 8-954 has been incorporated.		
10.	Description:	Windshield Anti-Ice System (Ref: ACA 8-16723)		
	Remarks:	Since procurement of Control Box CONT-178-1, it has become apparent that the addition of 2 power relays are necessary to handle increased load. Failure of contacts in the control box due to excessive electrical load, causes power to remain on windshield resulting in glass failure		
	Limitation:	Do not fly in icing conditions.		
	Note:	Transformer has been by-passed by TVA 47554 on Dwg. 8-60652 permitting limited de-fog but no anti-ice.		

	VALID	CANC.
4. PART B (Cont)		
11. Description: Rocket Intervalometer Installation (Ref: ACA 8-12781 NF) ⓒ Part No: CVAC UN66-2 Intervalometer. Quantity: One. Limitation: Must be installed prior to firing rockets or opening doors in the rocket mode.		
12. Description: Missile Intervalometer Installation (Ref: ECP 1034) ⓓ Part No: CVAC UN120 Intervalometer Quantity: One. Limitation: Must be installed prior to firing missiles on opening foors in the missile mode.		
4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263c, Part II.		
5. Deleted.		
6. Deleted.		

REPORT NO. ZD-8-032

PART III

WAIVERS FOR AIRPLANE
SERIAL NO. 53-1816

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 53-1816.

1. Engineering changes which have been incorporated in this airplane and for which engineering Change Proposals have been submitted to AMC but which have not been approved as of 27 February 1956, are as follows:

ECP NO. (CAC-F-102-)	Title
233R$_1$	Finish Requirements - Change of:
1010R$_1$	Landing Gear Skewed Axis - Change to:
1011	MG-3 Changes - Group II (Proto)
1013	Combustion Starter - Installation Of:
1068	Pratt & Whitney P-23 - Engine Changes Group III
1086	Structural Overheat Warning Switch - Deletion of:
1076	Interim Installation of Canopy Defog

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 27 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	4-15-56

3. Deleted.

VALID CANC.

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force Form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report.

Dates shown as expected parts delivery (EPD) are parts availability date and do not constitute date of installation in airplane.

Items denoted by circles opposite parts short refer to corresponding Limitations in Paragraph 4, Part B.

CONTRACTOR FURNISHED EQUIPMENT

Quantity		Description	Part No.	VALID	CANC.
8	ⓑ	Bolt, Wing Attach- Spar No. 6 (8 per airplane) (EPD - Available)	113-2		
1	ⓒ	Intervalometer - Rocket Equip. Inst. - Instl. Dwg 8-67186 (EPD 3-31-56)	UN-66-2		
1	ⓓ	Intervalometer - Missile Equip. Inst. - Instl. Dwg. 8-67186 (EPD 3-31-56)	UN-120		

GOVERNMENT FURNISHED AIRCRAFT EQUIPMENT

Quantity		Description	Part No.	VALID	CANC.
1	ⓐ	Valve Recirculating Oil Install 8-22947 GFAE Part No. 660599 (EPD 4-30-56)	8-22947-7		

4. PART B Shortages as listed in Air Force Form 263c, which affects the performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

Refer to corresponding shortages listed in Paragraph 4 - Part A, Items denoted by circle.

4. PART B (Cont.)

VALID CANC.

1. Description: Pilot Assist - Operation of (ACA 8-16862, 8-17186, TVA 46117 Change "D" on Dwg. 8-60755 and TVA 46539 on Dwg. 8-60010.)

Limitation:

1. Pilot assist is deactivated until the above mentioned ACA's and TVA's are accomplished.
2. Upon activation of pilot assist by incorporation of the above ACA's and TVA's, pilot assist is restricted to altitude above 25,000 feet at indicated air speeds below 360 knots.

   Note: Elevator limit switches must be set at ±2.3°.

---

2. Description: Roll Maneuver Limitations

Limitation: The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
   - a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight)
   - b. Do not exceed 80° per second for 360° rolls.
   - c. Uncoordinated maneuvers are prohibited.

4. PART B (Cont.)

VALID CANC.

2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.

3. Description: Pitch and Yaw Damper Operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a pirch "G" Limiter, pitch damper system shall not be used below 12,000 feet altitude at speeds above 480 knots.

4. Description: Trim Servo - Operation of

Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.

Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.

5. Description: Buzz Fix - High Speed (Ref. ACA 8-813)

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

4. PART B (Cont.)

VALID **CANC.**

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

---

6. Description: ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.

⑥

Part No: MS 20010-34 (8 pieces per airplane)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations:

Limitation:

a. Symmetrical Maneuvers

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers

1. Do not exceed normal load factor of 3.9g.
2. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight).
3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

		VALID	CANC.
4. PART B (Cont.)			
7. Description: @	Constant Speed Drive - Oil System for (Ref. ACA 8-15401, 8-15709, 8-16070)		
Part No:	GFAE #660599		
Quantity:	One		
Limitation:	Until the above ACA's are accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. power may occur.		
8. Description:	Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)		
Remarks:	TVA 38104A against drawing 8-60674 de-activates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.		
Reason:	Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.		
Limitation:	No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated. Note: This system inoperative until switch 644 is incorporated. (Switch 644 EPD-3-30-56).		

4. PART B (Cont)

9. Description: Rain Clearing System (Ref: ACA 8-954)

Remarks: Hot air blast shield protects vinyl edge of windshield.

Limitation: Rain clearing system should not be used until ACA 8-954 has been incorporated.

---

10. Description: Windshield Anti-Ice System (Ref: ACA 8-16723)

Remarks: Since procurement of Control Box CONT-178-1, it has become apparent that the addition of 2 power relays are necessary to handle increased load. Failure of contacts in the control load, causes power to remain on windshield resulting in glass failure.

Limitation: Do not fly in icing conditions.

Note: Transformer has been by-passed by TVA 47554 on Dwg. 8-60652 permitting limited defog but no anti-ice.

---

11. Description: Rocket Intervalometer Installation (Ref. ACA 8-12781 NF)

ⓒ

Part No: CVAC UN 66-2 Intervalometer.

Quantity: One

Limitation: Must be installed prior to firing rockets or opening doors in the rocket mode.

---

12. Description: Missile Intervalometer Installation (Ref. ECP 1034

ⓓ

Part No: CVAC UN 120 Intervalometer.

Quantity: One

4. PART B (Cont)

Limitation: Must be installed prior to firing missiles or opening doors in the missile mode.

4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263c, Part II.

5. Deleted.

6. Deleted.

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

ANALYSIS
PREPARED BY
CHECKED BY
REVISED BY "A"

A/C Ser No. 54-1371
PAGE 1
REPORT NO. ZD-8-032
MODEL F-102A
DATE 2-27-56

REPORT NO. ZD-8-032

PART IV

WAIVERS FOR AIRPLANE SERIAL NO. 54-1371

FORM 1818-A

VALID CANC.

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 54-1371.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 27 February 1956, are as follows:

ECP NO. (CAC-F-102-)	Title	VALID	CANC.
233R1	Finish Requirements - Change of.		
1010R1	Landing Gear Skewed Axis - Change to.		
1036	Exhaust Nozzle Vent - Installation of.		
1086	Structure Overheat Warning Switch - Deletion of.		
1102	Exactor Type M-1 Canopy Actuation Quantity Change		

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 27 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date	VALID	CANC.
ZS-8-054	Armament Loads	4-15-56		

3. Deleted.

VALID CANC.

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force Form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report.

Dates shown as expected parts delivered (EPD) are parts availability date and do not constitute date of installation in airplane.

Items denoted by circles opposite parts short refer to corresponding Limitations in Paragraph 4 Part B.

CONTRACTOR FURNISHED EQUIPMENT

Quantity		Description	Part No.	VALID	CANC.
8	ⓑ	Bolt, Wing Attach - Spar No. 6 (8 per Airplane) (EPD - Available)	BOL-113-2		
1	ⓒ	Intervalometer - Rocket Equip. Inst. - Instl. Dwg. 8-67186 (EPD 3-31-56)	UN-66-2		
1	ⓓ	Intervalometer - Missile Equip. Inst. - Instl. Dwg. 8-67186 (EPD 3-31-56)	UN-120		

GOVERNMENT FURNISHED AIRCRAFT EQUIPMENT

Quantity		Description	Part No.	VALID	CANC.
1	ⓐ	Valve, Recirculating Oil Install 8-22947 GFAE Part No. 660599 (EPD 4-30-56)	8-29947-7		

4. PART B Shortages as listed in Air Force Form 263c, which affects the performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

Refer to corresponding shortages listed in Paragraph 4, Part A, items denoted by circle.

4. PART B (CONT.)

VALID CANC.

1. Description: Pilot Assist - Operation of (ACA 8-16862, 8-17186, TVA 46117 Change "D" on Dwg 8-60755 and TVA 46539 on Dwg 8-60010)

Limitation:

1. Pilot assist is deactivated until the above mentioned ACA's and TVA's are accomplished.
2. Upon activation of pilot assist by incorporation of the above ACA's and TVA's, pilot assist is restricted to altitude above 25,000 feet at indicated air speeds below 360 knots.

   Note: Elevator limit switches must be set at 2.3°.

---

2. Description: Roll Maneuver Limitations.

Limitation: The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
   a. No roll rate restrictions for positive quadrant rolls (90° either side of level flight)
   b. Do not exceed 80° per second for 360° rolls.
   c. Uncoordinated maneuvers are prohibited.
2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.

	VALID	CANC:
4. PART B (Cont)		
3. Description: Pitch and Yaw Damper Operation Part No: Suitable Pitch "G" Limiter Quantity: One. Limitation: Without a pitch "G" limiter, pitch damper system shall not be used below 12,000 feet altitude at speeds above 480 knots.		
4. Description Trim Servo - Operation of Remarks: Low level operation with trim servo which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained. Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.		
5. Description: Buzz Fix - High Speed (Ref. ACA 8-813) Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level. Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.		
6. Description ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type. (b) Part No. MS 20010-34 (8 pieces per airplane) Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations:		

VALID CANC

4. PART B (Cont)

6. Limitation: a. Symmetrical Maneuvers

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers

1. Do not exceed normal load factor of 3.9g.
2. No roll rate restrictions for positive quadrant rolls (90° either side of level flight).
3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

---

7. Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15409, 8-15709, 8-16070)

@

Part NO: GFAE #660599

Quantity: One

Limitation: Until the above ACA's are accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of a-c power may occur.

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8. Description: Electronic Equipment - Ground cooling of (Ref ACA 8-699, 8-1006)

Remarks: TVA 38104A against drawing 8-60674 deactivates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

VALID CANC

4. PART B (Cont)

8. Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

Note: This system inoperative until switch 644 is incorporated. (Switch 644 EPD-3-30-56)

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9. Description: Rain Clearing System (Ref. ACA 8-954)

Remarks: Hot air blast protects vinyl edge of windshield.

Limitation: Rain clearing system should not be used until ACA 8-954 has been incorporated.

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10. Description: Rocket Intervalometer Installation (Ref. ACA-8-12781 NF)

ⓒ

Part No: CVAC UN66-2 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing rockets or opening doors in one rocket mode.

---

11. Description: Missile Intervalometer Installation

ⓓ

Part No: CVAC UN120 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing missiles or opening doors in the missile mode.

4. PART B (Cont)

12. Description: Windshield Anti-Ice System (Ref. ACA 8-17623)

Remarks: Since procurement of Control Box CONT-178-1, it has become apparent that the addition of 2 power relays are necessary to handle increased load. Failure of contacts in the control box due to excessive electrical load, causes power to remain on windshield resulting in glass failure.

Limit: Do not fly in icing conditions.

Note: Transformer has been by-passed by TVA 47554 on Drawing 8-60652 permitting limited de-fog but no anti-ice.

4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263c. Part II.

5. Deleted.

6. Deleted.

REPORT NO. ZD-8-032

PART V

WAIVERS FOR AIRPLANE

SERIAL NO. 54-1372

VALID CANC.

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 54-1372.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 27 February 1956, are as follows:

ECP NO. (CAC-F-102-)	Title	VALID	CANC.
$233r_1$	Finish Requirements - Change of:		
$1010r_1$	Landing Gear Skewed Axis - Change to:		
1036	Exhaust Nozzle Vent - Installation of:		
1086	Structure Overheat Warning Switch - Deletion of:		
1102	Exactor, Type M-1 Canopy - Actuation-Quantity Change		

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 27 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	4-15-56

3. Deleted

VALID CANC

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force Form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report.

NOTE: Dates shown as expected parts delivered date (EPD) are parts availability date and do not constitute date of installation in airplane.

Items denoted by circles opposite parts short refer to corresponding limitations in Paragraph 4 - Part B.

CONTRACTOR FURNISHED EQUIPMENT

Quantity		Description	Part No.	VALID	CANC
8	ⓑ	Bolts, Wing Attach - Spar No. 6 (8 per airplante) (EPD - available)	BOL-113-2		
1	ⓒ	Intervalometer-Rocket Equip. Inst. Instl. Dwg. 8-67186 (EPD - 3-31-56)	UN-66-2		
1	ⓓ	Intervalometer-Missile Equip. Inst. Instl. Dwg. 8-67186 (EPD 3-31-56)	UN-120		

GOVERNMENT FURNISHED AIRCRAFT EQUIPMENT

Quantity		Description	Part No.	VALID	CANC
1	ⓐ	Valve Recirculating Oil Install 8-22947 G.F.A.E. Part No. 660599 (EPD 4-30-56)	8-22947-7		

4. Part B Shortages as listed in Air Force Form 263c, which affects the performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

Refer to corresponding shortages listed in Paragraph 4 - Part A, Items denoted by circle.

4. PART B (Cont.)

VALID CANC.

1. Description: Pilot Assist - Operation of (ACA 8-16862, 8-17186, TVA 46117 Change "D" on Dwg. 8-60755 and TVA 46539 on Dwg. 8-60010.)

Limitation:

1. Pilot assist is deactivated until the above mentioned ACA's and TVA's are accomplished.
2. Upon activation of pilot assist by incorporation of the above ACA's and TVA's, pilot assist is restricted to altitudes above 25,000 feet at indicated air speeds below 360 knots.

   Note: Elevator limit switches must be set at ±2.3°.

---

2. Description: Roll Maneuver Limitations

Limitation: The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
   a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight)
   b. Do not exceed 80° per second for 360° rolls.
   c. Uncoordinated maneuvers are prohibited.
2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.

4. PART B (Cont.)	VALID	CANC.
3. Description: Pitch and Yaw Damper Operation Part No: Suitable Pitch "G" Limiter Quantity: One Limitation: Without a pitch "G" Limiter, pitch damper system shall not be used below 12,000 feet altitude at speeds above 480 knots.		
4. Description: Trim Servo - Operation of Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained. Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.		
5. Description: Buzz Fix - High Speed (Ref. ACA 8-813) Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level. Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.		

4. PART B (Cont.)

VALID CANC.

6. Description: ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.

ⓑ

Part No: MS 20010-34 (8 pieces per airplane)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations:

Limitation: a. Symmetrical Maneuvers

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers

1. Do not exceed normal load factor of 3.9g.
2. No roll rate restrictions for positive quadrant rolls.
3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

---

7. Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15411, 8-15709, 8-16070)

ⓐ

Part No: GFAE #660599

Quantity: One

4. PART B (Cont)

VALID CANC.

Limitation: Until the above ACA's are accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. power may occur.

8. Description: Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against drawing 8-60674 de-activates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

NOTE: This system inoperative until switch 644 is incorporated. (Switch 644 EPD- 3-30-56)

9. Description: Rain Clearing System (Ref. ACA 8-954)

Remarks: Hot air blast shield protects vinyl edge of windshield.

Limitation: Rain clearing system should not be used until ACA 8-954 has been incorporated.

10. Description: Rocket Intervalometer Installation (Ref. ACA 8-12781 NF)

Ⓒ

Part No. CVAC UN 66-2 Intervalometer

Quantity: One

Limitations: Must be installed prior to firing rockets or opening doors in the rocket mode.

4. PART B (Cont) — VALID — CANC.

11. Description: Missile Intervalometer Installation (Ref. ECP 1034) ⓓ

Part No: CVAC UN 120 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing missiles or opening doors in the missile mode.

12. Description: Windshield Anti Ice System (Ref. ACA 8-17623)

Remarks: Since procurement of Control Box CONT-178-1, it has become apparent that the addition of 2 power relays are necessary to handle increased load. Failure of contacts in the control box due to excessive electrical load, causes power to remain on windshield resulting in glass failure.

Limit: Do not fly in icing conditions.

Note: Transformer has been by-passed by TVA 47554 on Drawing 8-60652 permitting limited de-fog but no anti-ice.

4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263c, Part II.

5. Deleted.

6. Deleted.

REPORT NO. ZD-8-032

PART VI

WAIVERS FOR AIRPLANE

SERIAL NO. 54-1373

VALID CANC.

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 54-1373.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 27 February 1956, are as follows:

ECP NO. (CAC-F-102-)	Title
$233R_1$	Finish Requirements - Change of:
$1010R_1$	Landing Gear Skewed Axis - Change to:
1036	Exhaust Nozzle Vent - Installation of:
1086	Structure Overheat Warning Switch - Deletion of:
1102	**Exactor Type M-1 Canopy Actuation - Quantity Chg**

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 27 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	4-15-56

3. Deleted

	VALID	CANC

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force Form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4. PART B of this report.

Note: Dates shown as expected parts delivered (EPD) are parts availability date and do not constitute date of installation in airplane.

Items denoted by circles opposite parts short refer to corresponding limitations in Paragraph 4. PART B.

CONTRACTOR FURNISHED EQUIPMENT

Quantity		Description	Part No.	VALID	CANC
8	ⓑ	Bolts, Wing Attach - Spar No. 6 (8 per airplane) (EPD - available)	BOL-113-2		
1	ⓒ	Intervalometer - Rocket Equipment Installation Installation Dwg 8-67186 (EPD 3-31-56)	UN-66-2		
1	ⓓ	Intervalometer - Missile Equipment Installation Installation Dwg 8-67186 (EPD 3-31-56)	UN-120		

GOVERNMENT FURNISHED AIRCRAFT EQUIPMENT

Quantity		Description	Part No.	VALID	CANC
1	ⓐ	Valve - Recirculating Oil Installation Dwg 8-22947 GFAE Part No. 660599 Short (EPD 4-2-56)	8-22947-7		

4. PART B Shortages as listed in Air Force Form 263c, which affects the performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

Refer to corresponding shortages listed in Paragraph 4. PART A, Items denoted by circle.

4. PART B (Cont.)

VALID | CANC.

1. Description: Pilot Assist - Operation of (ACA 8-16862, 8-17186, TVA 46117 Change "D" on Dwg. 8-60755 and TVA 46539 on Dwg. 8-60010.)

Limitation:

1. Pilot assist is deactivated until the above mentioned ACA's and TVA's are accomplished.

2. Upon activation of pilot assist by incorporation of the above ACA's and TVA's, pilot assist is restricted to altitudes above 25,000 feet at indicated air speeds below 360 knots.

   Note: Elevator limit switches must be set at ±2.3°.

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2. Description: Roll Maneuver Limitations

Limitation: The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.

   a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight)

   b. Do not exceed 80° per second for 360° rolls.

   c. Uncoordinated maneuvers are prohibited.

4. PART B (Cont.)

VALID CANC.

2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.

3. Description: Pitch and Yaw Damper Operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a pitch "G" Limiter, pitch damper system shall not be used below 12,000 feet altitude at speeds above 480 knots.

4. Description: Trim Servo - Operation of

Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.

Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.

5. Description: Buzz Fix - High Speed (Ref. ACA 8-813)

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

4. PART B (Cont.) VALID CANC.

Limitations: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

---

6. Description: ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.

ⓑ

Part No: MS 20010-34 (8 pieces per airplane)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations:

Limitation:

a. Symmetrical Maneuvers

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers

1. Do not exceed normal load factor of 3.9g.
2. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight).
3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

4. PART B (Cont.)

VALID CANC.

7. Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15411, 8-15709, 8-16070)

@

Part No: GFAE #660599

Quantity: One

Limitation: Until the above ACA's are accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. power may occur.

8. Description: Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against drawing 8-60674 de-activates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

Note: This system inoperative until switch 644 is incorporated. (Switch 644 EPD 3-30-56)

4.	PART B (Cont)		VALID	CANC
9.	Description:	Rain Clearing System (Ref: ACA 8-954)		
	Remakrs:	Hot air blast shield protects vinyl edge of windshield.		
	Limitation:	Rain clearing system should not be used until ACA 8-954 has been incorporated.		
10.	Description:	Windshield Anti-Ice System (Ref: ACA 8-16723)		
	Remarks:	Since procurement of Control Box CONT-178-1, it has become apparent that the addition of 2 power relays are necessary to handle increased load. Failure of contacts in the control box due to excessive electical load, causes power to remain on windshield resulting in glass failure.		
	Limitation:	Do not fly in icing conditions.		
	Note:	Transformer has been by-passed by TVA 47554 on Dwg. 8-60652 permitting limited defog but no anti-ice.		
11.	Description: Ⓒ	Rocket Intervalometer Installation (Ref. ACA 8-12781 NF)		
	Part Number:	CVAC UN 66-2 Intervalometer		
	Quantity:	One		
	Limitation:	Must be installed prior to firing rockets or opening doors in the rocket mode.		
12.	Description: ⓓ	Missile Intervalometer Installation (Ref: ECP 1034)		
	Part Number:	CVAC UN 120 Intervalometer		

	VALID	CANC
4. PART B (Cont) 12. Quantity: One Limitation: Must be installed prior to firing missiles or opening doors in the missile mode.		
4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263c, Part II.		
5. Deleted		
6. Deleted		

REPORT NO. ZD-8-032

PART VII

WAIVERS FOR AIRPLANE

SERIAL NO. 54-1374

VALID CANC

The following items are deviations from contractual requirements for Model F-102A Airplane, AF-Serial No. 54-1374.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC, but which have not been approved as of 27 February 1956, are as follows:

ECP No. (CAC-F-102-)	Title	VALID	CANC
$233R_1$	Finish Requirements - Change of		
$1010R_1$	Landing Gear Skewed Axis - Change to		
1086	Structure Overheat Warning Switch - Deletion of		
1102	Exactor Type M-1 Canopy Actuation - Quantity Change		

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 27 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date	VALID	CANC
ZS-8-054	Armament Loads	4-15-56		

3. Deleted

VALID | CANC

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force Form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4. PART B of this report.

Note: Dates shown as expected parts delivered (EPD) are parts availability date and do not constitute date of installation in airplane.

Items denoted by circles opposite parts short refer to corresponding limitations in Paragraph 4. PART B.

CONTRACTOR FURNISHED EQUIPMENT

Quantity		Description	Part No.	VALID	CANC
8	ⓑ	Bolts, Wing Attach - Spar No. 6 (8 per airplane) (EPD - available)	BOL-113-2		
1	ⓒ	Intervalometer - Rocket Equipment Installation Installation Dwg 8-67186 (EPD 3-31-56)	UN-66-2		
1	ⓓ	Intervalometer - Missile Equipment Installation Installation Dwg 8-67186 (EPD 3-31-56)	UN-120		

GOVERNMENT FURNISHED AIRCRAFT EQUIPMENT

Quantity		Description	Part No.	VALID	CANC
1	ⓐ	Valve - Recirculating Oil Installation Dwg 8-22947 GFAE Part No. 660599 Shortage (EPD 4-2-56)	8-22947-7		

VALID CANC

4. PART B Shortages as listed in Air Force Form 263c, which affects the performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

Refer to corresponding shortages listed in Paragraph 4. PART A, Items denoted by circle.

1. Description: Pilot Assist - Operation of (ACA 8-16862, 8-17186, TVA 46117 Change 'D' on Dwg 8-60755 and TVA 46539 on Dwg 8-60010.

Limitation:
1. Pilot assist is deactivated until the abovementioned ACA's and TVAs are accomplished.
2. Upon activation of pilot assist by incorporation of the above ACA's and TVA's pilot assist is restricted to altitude above 25,000 feet at indicated air speeds below 360 knots.

Note: Elevator limit switches must be set at 2.3°.

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2. Description: Roll Maneuver Limitations

Limitation: The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
   - a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight)
   - b. Do not exceed 80° per second for 360° rolls.
   - c. Uncoordinated maneuvers are prohibited.
2. For flight regions above 480 knots indicated and below 12000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.

4. PART B (Cont)	VALID	CANC
3. Description: Pitch and Yaw Damper Operation Part No. Suitable Pitch "G" Limiter Quantity: One Limitation: Without a pitch "G" limiter, pitch damper system shall not be used below 12,000 feet altitude at speeds above 480 knots.		
4. Description: Trim Servo - Operation of Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained. Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.		
5. Description: Buzz Fix - High Speed (Ref ACA 8-813) Remarks: Without a 20-inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level. Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.		
6. Description: ACA 8-14914. Wing attach bolts - Spar Six - Interim use of MS type. ⓑ Part No.: MS 20010-34 (8 pieces per airplane) Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations:		

4. PART B (Cont) VALID CANC

Limitation: a. Symmetrical Maneuvers

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers

1. Do not exceed normal load factor of 3.9g.
2. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight).
3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

---

7. Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15404, 8-15709, 8-16070)

ⓐ

Part No: GFAE #660599

Quantity: One

Limitation: Until the above ACA's are accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. power may occur.

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8. Description: Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006) Switch (CVAC-SW-644)

Remarks: TVA 38104A against drawing 8-60674 de-activates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

4. PART B (Cont)			VALID	CANC
	Reason:	Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.		
	Limitation:	No electronic compartment ground cooling (Unless connected to ground cart) unit ACA 8-1006 has been incorporated.		
	Note: This system inoperative until switch 644 is incorporated. (Switch 644 EPD- 3-30-56)			
9.	Description:	Rain Clearing System (Ref. ACA 8-954)		
	Remarks:	Hot air blast shield protects vinyl edge of windshield.		
	Limitation:	Rain clearing system should not be used until ACA 8-954 has been incorporated.		
10.	Description: ⓒ	Rocket Intervalometer Installation (Ref. ACA 8-12781 NF)		
	Part No:	CVAC UN 66-2 Intervalometer		
	Quantity:	One		
	Limitations:	Must be installed prior to firing rockets or opening doors in the rocket mode.		
11.	Description: ⓓ	Missile Intervalometer Installation (Ref. ECP 1034)		
	Part No:	CVAC UN 120 Intervalometer		
	Quantity:	One		
	Limitation:	Must be installed prior to firing missiles or opening doors in the missile mode.		

VALID CANC

4. PART B (Cont)

12. Description: Windshield Anti Ice System (Ref. ACA 8-17623)

Remarks: Since procurement of Control Box CONT-178-1, it has become apparent that the addition of 2 power relays are necessary to handle increased load. Failure of contacts in the control box due to excessive electrical load, causes power to remain on windshield resulting in glass failure.

Limit: Do not fly in icing conditions.

Note: Transformer has been by-passed by TVA 47554 on Drawing 8-60652 permitting limited defog but no anti-ice.

B. Limitations on this airplane due to instrumentation requirments are as follows:

13. 1. Limitation: Missile bay armament inoperative.

Reference: TVA IN 40896 delete launchers in all missile bays.
TVA IN 42920 delete pneumatic lines that operate launchers.

Reason: Space in missile bays required for installation of recording equipment and termination panels.

14. 2. Limitation: Missile bay doors cannot be opened in flight.

Reference: TVA IN 45722 against 8-60644, sheet 27, Removed wire from the "armed safe" switch No. 737.

Reason: Opening of missile bay doors during flight is unsafe because of instrumentation equipment installed in the bays.

C. Pre-flight Inspection - Additional Requirements for.

Note: Aerodynamic pressure orifices installed in the L/H wing of this airplane made it necessary to route tubing bundles through

	VALID	CANC
4. PART B (Cont) the fuel tight bulkheads in four (4) places. (Convair Seals 8-17730.) Four (4) inspection ports have been provided on the lower wing surface, one beneath each seal and close to the drag angle. Each port is identified with the words "INSPECTION PORT INSTRUMENTATION TUBE SEAL" stenciled in 1/2 inch high letters. 1. It is MANDATORY that "Inspection of the four (4) Instrumentation Tube Seal" be made a preflight item and appear on prep sheets for taxi run, San Diago fly-away, and all flights at Palmdale prior to delivery of the airplane to NACA. 2. It is recommended that this inspection be a preflight item for flights made by NACA during their test program.		
4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263c, Part II.		
5. Deleted.		
6. Deleted.		

REPORT NO. ZD-8-032

PART VIII

WAIVERS FOR AIRPLANE

SERIAL NO. 54-1375

The following items are deviations from contractual requirements for Model F-102A airplane, AF serial No. 54-1375.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 27 February 1956, are as follows:

ECP NO. (CAC-F-102-)	Title	VALID	CANC.
$233R_1$	Finish Requirements - Change of:		
$1010R_1$	Landing Gear Skewed Axis - Change to:		
1024	Cockpit Ground Air Conditioning - Change of:		
1037	2" Rockets - Installation of:		
1076	Interim Installation Canopy Defog		
1086	Structure Overheat Warning Switch - Deletion of:		
1093	Speed Brakes - Enlargement of:		
1102	Exactor Type M-1 Canopy Actuation - Qty. Change:		

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 27 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	4-15-56

		VALID	CANC.
3.	Deleted		

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force Form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report.

NOTE: Dates shown as expected parts delivered (EPD) are parts availability date and do not constitute date of installation in airplane.

Items denoted by circle opposite parts short refer to corresponding limitations in Paragraph 4, PART B.

CONTRACTOR FURNISHED EQUIPMENT

Quantity		Description	Part No.	VALID	CANC.
8	ⓑ	Bolt, Wing Attach - Spar No. 6 (8 Per Airplane) (EPD Available)	BOL-113-2		
1	ⓒ	Intervalometer - Rocket Equip.Inst. Instl. Dwg. 8-67186 (EPD 3-31-56)	UN-66-2		
1	ⓓ	Intervalometer - Missile Equip.Inst. Instl. Dwg. 8-67186 (EPD 3-31-56)	UN-120		

GOVERNMENT FURNISHED AIRCRAFT EQUIPMENT

Quantity		Description	Part No.	VALID	CANC.
1	ⓐ	Valve, Recirculating Oil Install 8-22947 G.F.A.E. Part No. 660599 Short (EPD 4-2-56)	8-22947-7		

VALID | CANC.

4. PART B Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the Flight Test assignment or the intended usage.

Refer to corresponding shortages listed in Paragraph 4 - PART A, Items denoted by circle.

1. Description: Pilot Assist - Operation of (ACA 8-16862, 8-17186, TVA 46117 Change "D" on Dwg. 8-60755 and TVA 46539 on Dwg. 8-60010.)

   Limitation:
   1. Pilot assist is deactivated until the above mentioned ACA's and TVA's are accomplished.
   2. Upon activation of pilot assist by incorporation of the above ACA's and TVA's, pilot assist is restricted to altitude above 25,000 feet at indicated air speeds below 360 knots.

      Note: Elevator limit switches must be set at ±2.3°.

2. Description: Roll Maneuver Limitations

   Limitation: The roll restrictions with or without the side slip feedback system operative are:
   1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
      a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight.)

4. PART B (Cont.)

VALID CANC.

b. Do not exceed 80° per second for 360° rolls.

c. Uncoordinated maneuvers are prohibited.

2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.

---

3. Description: Pitch and Yaw Damper Operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a pitch "G" Limiter, pitch damper system shall not be used below 12,000 feet altitude at speeds above 480 knots.

---

4. Description: Trim Servo - Operation of

Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.

4. PART B (Cont.) VALID CANC.

Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.

---

5. Description: Buzz Fix - High Speed (Ref. ACA 8-813)

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

---

6. Description: ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.

⑥

Part No: MS 20010-34 (8 pieces per airplane)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.

Limitation: a. Symmetrical Maneuvers

Do not exceed normal load factor of 5.5g maximum.

	VALID	CANC.
4. PART B (Cont.) b. Asymmetrical Maneuvers 1. Do not exceed normal load factor of 3.9g. 2. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight). 3. For Asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.		
7. ⓐ Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15403, 8-15709, 8-16070) Part No: GFAE #660599 Quantity: One Limitation: Until the above ACA's are accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. power may occur.		
8. Description: Electronic Equipment - Ground Cooling of (Ref. ACA 8-699, 8-1006)		

4. PART B (Cont)	VALID	CANC

Remarks: TVA 38104A against drawing 8-60674 de-activates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lage.

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

Note: This system inoperative until switch 644 is incorporated. (Switch 644 EPD -3-30-56)

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9. Description: Windshield Anti-Ice System (Ref: ACA 8-16723)

Remarks: Since procurement of Control Box CONT-178-1, it has become apparent that the addition of 2 power relays are necessary to handle increased load. Failure of contacts in the control box due to excessive electricla load, causes power to remain on windshield resulting in glass failure.

Limitation: Do not fly in icing conditions.

Note: Transformer has been by-passed by TVA 47554 on Dwg. 8-60652 permitting limited defog but no anti-ice.

		VALID	CANC.
4. PART B (Cont.)			
10. Description: ⓒ	Rocket Intervalometer Installation (Ref. ACA 8-12781 NF)		
Part No:	CVAC UN66-2 Intervalometer		
Quantity:	One		
Limitation:	Must be installed prior to firing rockets or opening doors in the rocket mode.		
11. Description: ⓓ	Missile Intervalometer Installation (Ref. ECP 1034)		
Part No:	CVAC UN120 Intervalometer		
Quantity:	One		
Limitation:	Must be installed prior to firing missiles or opening doors in the missile mode.		
4. PART C	Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263c, Part II.		
5.	Deleted		
6.	Deleted		

REPORT NO. ZD-8-032

PART IX

WAIVERS FOR AIRPLANE

SERIAL NO. 54-1376

VALID CANC.

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 54-1376.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 27 February 1956, are as follows:

ECP NO. (CAC-F-102-)	Title	VALID	CANC.
233R$_1$	Finish Requirements - Change of:		
1010R$_1$	Landing Gear Skewed Axis - Change to:		
1024	Cockpit Ground Air Conditioning - Change of:		
1037	2" Rocket - Installation of:		
1076	Interim Canopy Defog		
1086	Structure Overheat Warning Switch - Deletion of:		
1093	Speed Brakes - Enlargement of:		
1102	Exactor Type M-1 Canopy Actuation - Quantity Change:		

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 27 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	4-15-56

VALID CANC.

3. Deleted

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force Form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report.

NOTE: Dates shown as expected part's delivery (EPD) are parts availability date and do not constitute date of installation in airplane.

Items denoted by circles opposite parts short refer to corresponding limitations in Paragraph 4, Part B.

CONTRACTOR FURNISHED EQUIPMENT

Quantity		Description	Part No.	VALID	CANC.
8	ⓑ	Bolts, Wing Attach - Spar No. 6 (8 Per Airplane) (EPD - Available)	BOL-113-2		
1	ⓒ	Intervalometer - Rocket Equip. Inst. Instl. Dwg. 8-67186 (EPD 3-31-56)	UN-66-2		
1	ⓓ	Intervalometer - Missile Equip. Inst. Instl. Dwg. 8-67186 (EPD 3-31-56)	UN-120		
1 Ea.		Door Inst. Speed Brake Inst. Ref. 8-73674 Doors 8-73634-3 & 5 Installed (EPD 3-31-56)	8-73674-73 8-73674-75		

FORM 1812-A

4. PART A (Cont.) VALID CANC.

GOVERNMENT FURNISHED AIRCRAFT EQUIPMENT

Quantity		Description	Part No.
1	ⓐ	Valve Recirculating Oil Install 8-22947 G.F.A.E. Part No. 660599 (EPD 4-2-56)	8-22947-7

4. PART B Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the Flight Test assignment or the intended usage.

Refer to corresponding shortages listed in Paragraph 4 - Part A, Items denoted by circles.

1. Description: Pilot Assist - Operation of (ACA 8-16862, 8-17186, TVA 46117 Change "D" on Dwg. 8-60755 and TVA 46539 on Dwg. 8-60010.)

   Limitation:
   1. Pilot assist is deactivated until the above mentioned ACA's and TVA's are accomplished.
   2. Upon activation of pilot assist by incorporation of the above ACA's and TVA's pilot assist is restricted to altitude above 25,000 feet at indicated air speeds below 360 knots.

      Note: Elevator limit switches must be set at ±2.3°.

2. Description: Roll Maneuver Limitations

   Limitation: The roll restrictions with or without the side slip feedback system operative are:
   1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.

	VALID	CANC.
4. PART B (Cont.) a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight) b. Do not exceed 80° per second for 360° rolls. c. Uncoordinated maneuvers are prohibited. 2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.		
3. Description: Pitch and Yaw Damper Operation Part No: Suitable Pitch "G" Limiter Quantity: One Limitation: Without a pitch "G" Limiter, pitch damper system shall not be used below 12,000 feet altitude at speeds above 480 knots.		
4. Description: Trim Servo - Operation of Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained. Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.		

4. PART B (Cont.) — VALID — CANC.

5. Description: Buzz Fix - High Speed (Ref. ACA 8-813)

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

---

6. Description: ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.

⑥

Part No: MS 20010-34 (8 pieces per airplane)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations:

Limitation: a. Symmetrical Maneuvers

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers

1. Do not exceed normal load factor of 3.9g.
2. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight).
3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2 of the maximum allowable aileron throw.

4. PART B (Cont.)		VALID	CANC.
7. Description: ⓐ	Constant Speed Drive - Oil System for (Ref. ACA 8-15403, 8-15709, 8-16070)		
Part No:	GFAE #660599		
Quantity:	One		
Limitation:	Until the above ACA's are accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. power may occur.		
8. Description:	Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)		
Remarks:	TVA 38104A against drawing 8-60674 deactivates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.		
Reason:	Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.		
Limitation:	No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated. NOTE: This system inoperative until switch 644 is incorporated. (Switch 644 EPD - 3-30-56)		

4. PART B (Cont)

			VALID	CANC
9.	Description:	Windshield Anti-Ice System (Ref: ACA 8-16723)		
	Remarks:	Since procurement of Control Box CONT-178-1, it has become apparent that the addition of 2 power relays are necessary to handle increased load. Failure of contacts in the control box due to excessive electrical load, causes power to remain on windshield resulting in glass failure.		
	Limitation:	Do not fly in icing conditions.		
	Note:	Transformer has been by-passed by TVA 47554 on Dwg. 8-60652 permitting limited defog but no anti-ice.		
10.	Description:	Rocket Intervalometer Installation (Ref: ACA 8-12781 NF)		
	Ⓒ Part No:	CVAC UN 66-2 Intervalometer		
	Quantity:	One		
	Limitation:	Must be installed prior to firing rockets or opening doors in the rocket mode.		

	VALID	CANC.
4. PART B (Cont.) 11. Description: Missile Intervalometer Installation (Ref. ECP 1034) ⓓ Part No: CVAC UN 120 Intervalometer Quantity: One Limitation: Must be installed prior to firing missiles or opening doors in the missile mode.		
4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263c, Part II.		
5. Deleted		
6. Deleted		

REPORT NO. ZD-8-032

PART X

WAIVERS FOR AIRPLANE

SERIAL NO. 54-1377

VALID CANC.

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 54-1377.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 27 February 1956, are as follows:

ECP NO. (CAC-F-102-)	Title	VALID	CANC.
$233R_1$	Finish Requirements - Change of:		
$1010R_1$	Landing Gear Skewed Axis - Change to:		
1024	Cockpit Ground Air Conditioning - Change of:		
1037	2" Rockets - Installation of:		
1076	Interim Canopy Defog		
1086	Structure Overheat Warning Switch - Deletion of:		
1093	Speed Brakes - Enlargement of:		
1102	Exactor Type M-1 Canopy Actuation - Quantity Change		

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 27 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	4-15-56

VALID CANC.

3. Deleted

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force Form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 - PART B of this report.

Note: Dates shown as expected delivery date (EPD) are parts availability date and do not constitute date of installation in airplane.

Items denoted by circles opposite parts short refer to corresponding Limitations in Paragraph 4, PART B.

CONTRACTOR FURNISHED EQUIPMENT

Quantity	Description	Part No.
1 Ea.	Door Inst. Speed Brake Inst. Ref. 8-73674 Doors 8-73634-3 & -5 Installed (EPD 4-2-56)	8-73674-73 8-73674-75
8 Ea. ⓑ	Bolt, Wing Attach.-Spar No. 6 (8 per airplane) (EPD available)	BOL-113-2
1 Ea. ⓒ	Intervalometer-Rocket Equip. Inst. Instl. Dwg. 8-67186 (EPD 3-31-56)	UN-66-2
1 Ea. ⓓ	Intervalometer-Missile Equip.Inst. Instl. Dwg. 8-67186 (EPD 3-31-56)	UN-120

GOVERNMENT FURNISHED AIRCRAFT EQUIPMENT

Quantity	Description	Part No.
1 Ea. ⓐ	Valve Recirculating OIL Install 8-22947 G.F.A.E. Part No. 660599 Short (EPD 4-2-56)	8-22947-7

4. PART B Shortages as listed in Air Force Form 263c, which affects the performance of mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test asseignment or intended usage.

Refer to corresponding shortages listed in Paragraph 4 - PART A, Items denoted by circle.

Description: Pilot Assist - Operation of (ACA 8-16862, 8-17186, TVA 46117 Change "E" on Dwg. 8-60755 and TVA 46539 on Dwg. 8-60010.

1. Pilot assist is deactivated until the above mentioned ACA's and TVA's are accomplished.

2. Upon activation of pilot assist by incorporation of the above ACA's and TVA's, pilot assist is restricted to altitude above 25,000 feet at indicated air speeds below 360 knots.

   Note: Elevator limit switches must be set at ±2.3°.

Description: Roll Maneuver Limitations

Limitation: The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
   a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight)
   b. Do not exceed 80° per second for 360° rolls.
   c. Uncoordinated maneuvers are prohibited.

4. PART B (Cont.)

VALID CANC.

2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.

---

3. Description: Pitch and Yaw Damper Operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a pitch "G" Limiter, pitch damper system shall not be used below 12,000 feet altitude at speeds above 480 knots.

---

4. Description: Trim Servo - Operation of

Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.

Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.

---

5. Description: Buzz Fix - High Speed (Ref. ACA 8-813)

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

VALID CANC

4. PART B (Cont.)

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

ⓑ

6. Description: ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.

Part No: MS 20010-34 (8 pieces per airplane)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.

Limitation:

a. Symmetrical Maneuvers

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers

1. Do not exceed normal load factor of 3.9g.
2. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight.)
3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

4. PART B (Cont.)

VALID CANC.

7. Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15403, 8-15709, 8-16070)

ⓐ

Part No: GFAE #660599

Quantity: One

Limitation: Until the above ACA's are accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C power may occur.

---

8. Description: Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against drawing 8-60674 de-activates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

Note: This system inoperative until switch 644 is incorporated. (Switch 644 EPD- 3-30-56)

14. PART B (Cont)

9. Description: Rocket Intervalometer Installation (Ref: ACA 8-12781 NF)

ⓒ Part No: CVAC UN66-2 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing rockets or opening doors in one rocket mode.

---

10. Description: Missile Intervalometer Installation (Ref: ECP 1034)

ⓓ Part No: CVAC UN120 Intervalometer

Quantity: One

Limitation: Must be installed prior to fi firing missiles or opening doors in the missile mode.

---

11. Description: Windshield Anti-Ice System (Ref. ACA 8-17623)

Part No: Since procurement of Control Box CONT-178-1, it has become apparent that the addition of 2 power relays are necessary to handle increased load. Failure of contacts in the control box due to excessive electrical load causes power to remain on windshield resulting in glass failure.

Limitation: Do not fly in icing conditionts.

Note: Transformer has been by-passed by TVA 47554 on Drawing 8-60652 permitting limited de-fog but no anti-ice.

	VALID	CANC.
4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263c, Part II.		
5. Deleted		
6. Deleted		

ANALYSIS
PREPARED BY
CHECKED BY
REVISED BY

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

A/C Ser No. 54-1378
PAGE 1
REPORT NO. ZD-8-032
MODEL F-102A
DATE 2-27-56

REPORT NO. ZD-8-032

PART XI

WAIVERS FOR AIRPLANE

SERIAL NO. 54-1378

		VALID	CANC
	The following items are deviations from contractual requirements for Model F-102A Airplane, AF Serial No. 54-1378.		
1.	Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 27 February 1956, are as follows:		
ECP No. (CAC-F-102-)	Title		
$233R_1$	Finish Requirements - Change of:		
$1010R_1$	Landing Gear Skewed Axis - Change to:		
1024	Cockpit Ground Air Conditioning - Change of:		
1037	2" Rockets - Installation of:		
1076	Interim Canopy Defog		
1086	Structure Overheat Warning Switch - Deletion of:		
1093	Speed Brake - Enlargement of:		
1102	Exactor - Type M-1 Canopy Actuation - Quantity Change		
2.	Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 27 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables): EXHIBIT "A" PARAGRAPH (b) Stress Analysis		

Report No.	Title	Anticipated Schedule Date	VALID	CANC
ZS-8-054	Armament Loads	4-15-56		

3. Deleted.

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force Form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report.

Note: Dates shown as expected parts delivery (EPD) are parts availability date and do not constitute date of installation in airplane.

Items denoted by circles opposite parts short refer to corresponding limitations in Paragraph 4, Part B.

CONTRACTOR FURNISHED EQUIPMENT

Quantity		Description	Part No.
8	ⓑ	Bolts, Wing Attach - Spar No. 6 (8 per airplane) (EPD- Available)	BOL-113-2
1 ea		Door Inst. Speed Brake Inst. Ref Ref. 8-73674 Doors 8-73634-3 & 5 installed (EPD 4-5-56)	8-73674-73 8-73674-75
1	ⓒ	Intervalometer-Rocket Equip. Inst. Instl. Dwg. 8-67186 (EPD 3-31-56)	UN-66-2
1	ⓓ	Intervalometer-Missile Equip. Inst. Instl. Dwg. 8-67186 (EPD 3-31-56)	UN-120

GOVERNMENT FURNISHED AIRCRAFT EQUIPMENT

Quantity		Description	Part No.
1	ⓐ	Valve Recirculating Oil Install 8-22947 GFAE Part No. 660599 Short (EPD 4-5-56)	8-22947-7

4. Part B Shortages as listed in Air Force Form 263c, which affects the performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

Refer to corresponding shortages listed in Paragraph 4 - Part A, items denoted by circle.

4. PART B (Cont) VALID CANC

1. Description: Pilot Assist - Operation of (ACA 8-16862, 8-17186, TVA 46117 Change "D" on Dwg. 8-60755 and TVA 46537 on Dwg. 8-60010.

Limitation:

1. Pilot assist is deactivated until the abovementioned ACA's and TVA's are accomplished.
2. Upon activation of pilot assist by incorporation of the above ACA's and TVA's, pilot assist is restricted to altitude above 25,000 feet at indicated air speeds below 360 knots.

Note: Elevator limit switches must be set at 2.3°.

2. Description: Roll Maneuver Limitations

Limitation: The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
    a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight)
    b. Do not exceed 80° per second for 360° rolls.
    c. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.7g.

4. PART B (Cont)

VALID CANC

3. Description: Pitch and Yaw Damper Operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a Pitch "G" Limiter, Pitch damper system shall not be used below 12,000 feet altitude at speeds above 480 knots.

---

4. Description: Trim Servo - Operation of

Remarks: Low level operation with trim servo, which might prove hazardous in the the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.

Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.

---

5. Description: Buzz Fix - High Speed
Ref.: ACA 8-813

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach number creating a sharp increase in vibration and noise level.

Limitations: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

---

6. Description: ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.

⑥

Part No: MS-20010-34 (8 pieces per airplane)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations:

4. PART B (Cont)

VALID CANC

Limitation: a. Symmetrical Maneuvers

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers

1. Do not exceed normal load factor of 3.9g.
2. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight.)
3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

7. Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15403, 8-15709, 8-16070)

ⓐ

Part No: GFAE #660599

Quantity: One

Limitation: Until the above ACA's are accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of a-c power may occur.

8. Description: Electronic Equipment - Ground Cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against drawing 8-60674 deactivates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

4. PART B (Cont)			VALID	CANC
	Reason:	Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.		
	Limitation:	No electronic compartment ground cooling (unless connected to ground card) until ACA 8-1006 has been incorporated.		
	Note:	This system inoperative until switch 644 is incorporated. (Switch 644 EPD 3-30-56)		
9.	Description:	Windshield Anti-Ice System (Ref: ACA 8-17623		
	Remarks:	Since procurement of Control Box CONT 178-1, it has become apparent that the addition of 2 power relays are necessary to handle increased load. Failure of contacts in the control box due to excessive electrical load, causes power to remain on windshield resulting in glass failure.		
	Limitation:	Do not fly in icing conditions.		
	Note:	Transformer has been by-passed by TVA 47554 on Dwg. 8-60652 permitting limited defog but no anti-ice.		
10.	Description:	Rocket Intervalometer Installation (Ref: ACA 8-12781 NF)		
	Ⓒ Part No:	CVAC UN 66-2 Intervalometer		
	Quantity:	One		
	Limitation:	Must be installed prior to firing rockets or opening doors in the rocket mode.		

4. PART B (Cont)

11. Description: Missile Intervalometer Installation (Ref: ECP 1034)

Part No: ⓓ CVAC UN 120 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing missiles or opening doors in the missile mode.

4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263c, Part II.

5. Deleted.

6. Deleted.

REPORT NO. ZD-8-032

PART XII

WAIVERS FOR AIRPLANE

SERIAL NO. 54-1379

VALID CANC.

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 54-1379.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 27 February 1956, are as follows:

ECP NO. (CAC-F-102-)	Title	VALID	CANC.
$233R_1$	Finish Requirements - Change of:		
$1010R_1$	Landing Gear Skewed Axis - Change to		
1024	Cockpit Ground Air Conditioning - Change		
1037	2" Rockets - Installation of:		
1076	Interim Canopy Defog		
1086	Structure Overheat Warning Switch - Deletion of:		
1093	Speed Brake - Enlargement of:		
1102	Exactor Type M-1 Canopy Actuation - Quantity Change		

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 27 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	4-15-56

	VALID	CANC.
3. Deleted		

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force Form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, These limitations are defined in 4 PART B of this report.

NOTE: Dates shown as expected parts delivered (EPD) are parts availability date and do not constitute date of installation in airplane.

Items denoted by circles opposite parts short refer to corresponding Limitations in Paragraph 4, Part B.

CONTRACTOR FURNISHED EQUIPMENT Bo1-113-2

8 Bolts, Wing Attach - Spar No: 6
(8 per Airplane)

Quantity	(EPD-Available) Description	Part No.	VALID	CANC.
1 Ea.	Door Inst. Speed Brake Inst. Ref. 8-73674 Doors 8-73634-3 & 5 installed (EPD 4-10-56)	8-73674-73 -75		
1	Intervalometer - Rocket Equip. Inst. Instl. Dwg. 8-67186 (EPD 3-31-56)	UN-66-2		
1	Intervalometer - Missile Equip. Inst. Instl. Dwg. 8-67186 (EPD 3-31-56)	UN-120		

GOVERNMENT FURNISHED AIRCRAFT EQUIPMENT

Quantity	Description	Part No.	VALID	CANC.
1	Valve Recirculating OIL Install 8-22947 G.F.A.E. Part No. 660599 Short (EPD 4-2-56)	8-22947-7		

	VALID	CANC.
4. PART B Shortages as listed in Air Force Form 263c, which affects the performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage. Refer to corresponding shortages listed in Paragraph 4, Part A, Items denoted by circle.		

	VALID	CANC.
4. PART B (Cont.)		
1. Description: Pilot Assist - Operation of (ACA 8-16862, 8-17186, TVA 46117 Change "D" on Dwg. 8-60755 and TVA 46539 on Dwg. 8-60010. Limitation: 1. Pilot assist is deactivated until the above mentioned ACA's and TVA's are accomplished. 2. Upon activation of pilot assist by incorporation of the above ACA's and TVA's, pilot assist is restricted to altitude above 25,000 feet at indicated air speeds below 360 knots. Note: Elevator limit switches must be set at ±2.3°.		
2. Description: Roll Maneuver Limitations Limitation: The roll restrictions with or without the side slip feedback system operative are: 1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated. a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight) b. Do not exceed 80° per second for 360° rolls. c. Uncoordinated maneuvers are prohibited.		

4. PART B (Cont.)	VALID	CANC.
2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.		
3. Description: Pitch and Yaw Damper Operation Part No: Suitable Pitch "G" Limiter Quantity: One Limitation: Without a pitch "G" Limiter, pitch damper system shall not be used below 12,000 feet altitude at speeds above 480 knots.		
4. Description: Trim Servo - Operation of Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained. Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.		
5. Description: Buzz Fix - High Speed (Ref. ACA 8-813) Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.		

4. PART B (Cont.) **VALID** **CANC.**

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

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6. Description: ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.

Part No: MS 20010-34 (8 pieces per airplane)

ⓑ Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations:

Limitation:

a. Symmetrical Maneuvers

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers

1. Do not exceed normal load factor of 3.9g.
2. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight).
3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

4 PART B (Cont)

VALID CANC.

7. Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15403, 8-15709, 8-16070)

Part No: GFAE 660599

Quantity: One

Limitation: Until the above ACA's are accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. power may occur.

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8. Description: Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against drawing 8-60674 de-activates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

Note: This system inoperative until switch 644 is incorporated. (Switch 644 EPD-3-30-56)

	VALID	CANC.

4. PART B (Cont)

9. Description: Windshield Anti-Ice System (Ref: ACA8-17623)

Remarks: Since procurement of Control Box CONT-178-1, it has become apparent that the addition of 2 power relays are necessary to handle increased load. Failure of contacts in the control box due to excessive electrical load, causes power to remain on windshield resulting in glass failure.

Limitation: Do not fly in icing conditions.

Note: Transformer has been by-passed by TVA 47554 on Dwg. 8-60652 permitting limited de-fog but no anti-ice.

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10. Description: Rocket Intervalometer Installation (Ref. ACA 8-12781 NF)

ⓒ Part No: CVAC UN66-2 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing rockets or opening doors in the rocket mode.

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11. Description: Missile Intervalometer Installation (Ref. ECP 1034)

ⓓ Part No: CVAC UN120 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing missiles or opening doors in the missile mode.

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4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263c, Part II.

5. Deleted

6. Deleted

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION

SAN DIEGO

REPORT ZD-8-033

DATE 31 Oct 1955

MODEL F-102A

TITLE

REPORT NO. ZD-8-033
DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102 AIRPLANE AF S/N 53-1804
CONTRACT AF33(600)-5942

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES 14

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

FORM 1812A-4

This report is prepared to define the condition of the aircraft as of factory completion for final acceptance by the Air Force.

PART I:

The following items are deviations from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1804.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 5 October 1955, are as follows:

ECP No. (CAC-F102-)	Title
1020	Landing Gear Warning System - Positive Warning
1022	Elevator - Change from 10° to 8° Down Surface Travel
1031	Pratt & Whitney P-23 Engine Changes Group II
1038	Incorporation of AF Comment & Misc. Spec. Corrections

2. Engineering data listed in exhibit of the contract which were required to be submitted prior to 31 October 1955, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract exhibit):

Report No.	Title
ZS-8-054	Armament Loads
Remarks:	Reason for non-submittal; Motions load data not available at this time, due to enadequate flight test correlation of reac and test stand loads.
ZS-8-059	Armament Analysis
Remarks:	(Same as ZS-8-054 above) Anticipated submittal date 15 November 1955.

3. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-091 dated 19 February 1954, revised 29 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 31 October 1955.

4. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have not been approved as of 31 October 1955.

NOTE: It is anticipated that Items 3 and 4 will be revised on 1 December 1955 and each month thereafter.

4. PART A The following are shortages at time of factory completion. It is anticipated that these items will be reflected in the Air Force Form 263C Part 2.

Quantity	Description	Part No.
4	Seal - Cable & Link Instl. 8-40530	Seal 175
1	Ram-Air Turbine - Tubing-Pres Instl. 8-81306	Tubing & Misc. Pcs.
1	Amplifier Rack-Pitch & Yaw Instl. 8-92933-1	QC 29A-1
1 Ea	Elevon Lockout Valve Instl. 8-81045	VA 1056-1 VA 1056
1	Cooler Installation Instl. 8-22519-3	8-22957-7
1	Actuator Harness Instl. 8-68966	UN 110-5
1	Main Fuel Line Instl. Instl. 8-27401	REG 150-3
Noted	Power Supply Control Amplifiers Instl. 8-36134	2 Ea 463305-110 4 Ea 423106-110 4 Ea 423107-110
2	Tube - Engine Build-up Instl. 8-20395	8-22308
1	"G" Limiter Equipment Instl. 8-67186	UN 66-2
1	Rocket Intervalometer Instl. 8-67186	UN 120

5. Part A (Cont)

Quantity	Description	Part No.
1	Elevon Lockout Valve Instl. 8-81045	VA 1056-1
1 each	Curtain Assy's Instl. 8-64122	8-62272, 8-62272-1, 8-62272-3 and -5
1	Light Assy - Taxi	4570
1	Clock (MIL-C-6499)	Type A -13A
2	Lamp Assy. - Spare (red)	AN 3121-R313
1	Lamp Assy. - Spare (white)	AN 3121-1819
1	Compass - Magnetic (MIL-C-5604)	Type AN 5766-T4 or -4
1	Antenna - Data Link	(Not available)

4. PART B Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or the intended usage.

Description: Pilot Assist
Ref. ACA 8-724 8-754 8-762 8-884
8-734 8-757 8-777 8-886
8-735 8-760 8-810

Part No:
1. Suitable Pitch "G" Limiter
2. Suitable Roll Coupling Limiting Device (Ref. ACA 8-754, 8-884)
3. Elevator Limit Switches (Ref. ACA 8-735, 8-810)
4. Aileron Limit Switches (Ref. ACA 8-734)
5. CVAC #POTE 17-6-1 (Ref. ACA 8-11864)
6. Low Force Lockout Valves CVAC # VA 1056 & VA 1056-1 (Ref. ACA 8-777)
7. UN 36-39 (Ref. ACA 8-724)

Limitation: Above items 3, 4, 5 and 7 must be installed prior to or concurrent with activation of the automatic flight control system. Until items 1 and 2 are installed, PA will be used only within the aileron limit switch settings and flight regimes specified in DC-8-340, and the following elevator limit switch settings ± 2.3° above 15,000 ft. or below M=0.6; ± 1.0° above M=0.6 at altitudes below 15,000 ft. Until item 6 is installed, forces required for, and surface transients resulting from, the PA manual override feature are excessive. Manual over-ride should be attampted only as a last resort.
Note: Items 3 and 4 will be superceded by Item 1 and 2.

Description: Pitch and Yaw damper operation.
Part No: Suitable pitch "G" Limiter.
Quantity: One
Limitation: Without a pitch "G" limiter, pitch damper system shall not be used below 15,000 feet altitude.

Description: Missile Intervalometer Installation (Ref. ECP 1034)
Part No: CVAC UN 120 Intervalometer
Quantity: One
Limitation: Must be installed prior to firing Missiles of opening doors in the Missile Mode.

4. PART B (Con)

Description: Rocket Intervalometer Installation (Ref. ACA 8-12792)
Part No: 1. CVAC UN 66-2 Intervalometer
2. CVAC REL 293 Relay
Quantity: One each
Limitation: 1. Must be installed prior to firing rockets or opening doors in the rocket mode.
2. Until installed, there will be no remote control for Armament Bay Doors and Launchers. Extreme caution should be used if live arms are carried.

Description: Armament Control System Revision of (Ref. ACA 8-15549 and 8-14707)
Part No: CVAC LI 320
Quantity: One each
Remarks: 1. LI 320 replaces mis-fire light with one that can be tested and dimmed.
2. Adds relay box, door switches and launcher switches; all of which are required for armament re-set system to prevent inadvertent and/or out of sequence door and launcher operation.
Limitation: 1. Missile mis-fire light cannot be tested or dimmed.

Description: Fuel Flow Joiner (Ref. ACA 8-708)
Part No: CVAC REG 150-3
Quantity: One
Remarks: Provides fuel flow joiner in tank to engine fuel system to equalize the flow quantity-wise. This insures equal depletion from both sides and eliminates present necessity of pilot to maintain latoral balance with boost pump switch control.
Limitation: Until accomplished, pilot must monitor fuel quantity to maintain equal distribution.

Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15402)
Part No: CVAC FI 23-5
Quantity: One
Limitation: Until ACA 8-15402 is accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. power may occur.

Description: Take-off Trim Position (Ref. Differential Linkage Installation. ACA 8-500)
Part No: CVAC UN 110-5
Quantity: One
Remarks: Interim substitution of elevator trim

4. PART B (Con)

actuator ACTU le-7 (Per TVA 41411 on Dwg. 8-49346) for UN 110-5 imposes the following limitation.

Limitation: Until such time that interim ACTU 13-7 is replaced by UN 110-5, pilot must trim elevator from stick button to some position above 5 degrees UP before take-off trim circuit will function as designed.
Note: Elevator will not trim to 5 degrees UP position on take-off trim circuit if starting position is less than 5 degrees up. Installation of UN 110-5 lifts the limitation.

Description: Windshield Anti-Ice Circuit -- Add transformers, revise wire gauges and circuits, etc. to increase wattage on NESA glass. (Ref. ACA 8-653 and 8-15496).
Part No: CVAC TRANS 294
Quantity: Two
Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the windshield free of ice.
Limitation: The airplane should not be flown in icing conditions until ACA 8-653 and 8-15496 have been incorporated. Also, de-fog may not be provided under extreme conditions.

Description: Radome Anti-Ice System ACA 8-13828
Remarks: Present Anti-Ice distribution ring found inadequate in tests
Limitation: Reduced radar capability during icing conditions.

Limitations on A/C 53-1804 due to instrumentation requirements, are as follows:

Description: Armament System, deletion of trigger switch wiring (Ref. TVA IN-37228)
Remarks: Trigger switch used for instrumentation record switch. Safety precaution - to prevent opening of missile bay doors in flight.
Limitation:
1. No firing of armament
2. No opening of missile bay doors during flight

Description: Center Missile Bay Armament, deletion of (Ref TVA IN-40801, IN-40802, IN-40270)
Remarks: Deleted center missile bay armament, forward and aft, to provide room for instrumentation equipment.
Limitation: No firing of armament

4. PART C

Work tasks not accomplished on this airplane at time of final delivery shall be referenced in the Air Force Form 263C Part VI.

4. PART B (Cont)

Description: Electronic Compartment - Ground Cooling (Ref. ACA 8-699)
Part No.: VA 931-2, 8-87146 Duct, 8-89119 Duct, 8-89231 Duct
Quantity: One each
Remarks: Present system provided insufficient electronic ground cooling as revealed by Flight Test.
Limitation: Electronic equipment cannot be operated on ground during high ambient conditions (approx. 120°F) until ACA 8-699 has been incorporated.

Description: ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.
Part No.: MS 20010-34 (8 pieces per airplane)
Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.
Limitation: a. Symmetrical Maneuvers -

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers -

1. Do not exceed normal load factor of 3.9g maximum.
2. Do not exceed change in bank angle of 100° maximum.
3. Do not exceed roll rate of 100'/sec. maximum.
4. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

Limitations due to instrumentation requirements are as follows:

Description: Armament System, deletion of trigger switch wiring (Ref. TVA IN-37228)
Remarks: Trigger switch used for instrumentation record switch. Safety precaution - to prevent opening of missile bay doors in flight.
Limitation: 1. No firing of armament
2. No opening of missile bay doors during flight.

Description: Center Missile Bay Armament, deletion of. (Ref. TVA IN-40801, IN-40802, IN-40270)
Remarks: Deleted center missile bay armament, forward and aft, to provide room for instrumentation equipment.
Limitation: No firing of armament

4. PART B (Cont)

Description: Differential Linkage - Elevator System (Ref. ACA's 8-500 8-14623 8-14626 8-14647
Remarks: Elevator controls are considered too sensitive.
Limitation: Precise flying in certain regimes difficult, thereby affecting phase VI and VII evaluation.

Description: Elevator Stick Forces (Ref. ACA 8-700)
Remarks: Stick forces are approximately 50% too high. A spring of lower rate will be incorporated in the elevator feel cylinder to reduce take-off and landing forces. Also the "A" intelligence unit will be revised to lower the in-flight feel forces.
Limitation: None - More pilot effort to perform maneuvers.

Description: Control Stick - Increase in Length (Ref. ACA 8-702, 8-14187
Remarks: Stick is considered too short.
Limitation: At high seat adjustment it is difficult to obtain full aileron throw with the double yoke grip.

Description: Pilot Assist System
(Ref. ACA 8-768 8-760 8-724 8-15212
8-11864 8-14296 8-777 8-15103
8-764 8-762 8-757 8-15129
8-14574 8-14579 8-13802 8-14704
8-810 8-10935 8-834 8-734
8-14827 8-14629 8-523 8-735
8-15092 8-15086 8-14581 8-15079
AND PITCH "G" LIMITING DEVICE 8-14196
Remarks: At present there is no pilot assist system installed. Major items not satisfactorily resolved was pitch limiting and follow up system and pitch attitude control.
Limitation: Fully automatic control not available.

4. PART B (Cont)

Description: Pitch and Yaw Damper System
Ref: ACA 8-768 8-777 8-13802 8-734
8-764 8-757 8-14574 8-735
8-14827 8-834 8-14196 8-15079
8-10933 8-14629 8-14579 8-15092
8-11864 8-810 8-15212
AND PITCH "G" LIMITING DEVICE 8-15086
8-14581

Remarks: The reliability and functions of the existing system is submarginal without incorporating the known improvements. Until a satisfactory Pitch "G" limiting system is developed, the following limitations listed below will still exist.

Limitation: Pitch Damper System shall not be used below 15,000 feet, at speeds in excess of Mach 0.65.

Description: Landing Gear Position and Warning Circuit
ECP 1020 and ACA 8-14476 8-14383

Remarks: Present Landing Gear Warning System will operate at all altitudes. New system includes altitude and air speed switch and will operate warning system only when air speed is below 250 knots and altitude is less than 10,000 feet.

Limitation: None

Description: Nose Wheel Well Curtains
Ref: ACA 8-696

Remarks: Existing curtains pulled loose at high landing speeds.

Limitation: Possible for snow, ice and debris to enter Nose Wheel Well until adequate curtains are installed.

Description: Armament Control System
ECP 1034 ACA 8-783 8-14771 8-15017
8-766 8-14769 8-14947
8-14680 8-14817 8-14931
8-14707 8-15249 8-14955
8-14772 8-15024 8-14709

Remarks: Design improvement to relocate reset switches and remote control disconnect to L.H. wheel well and add door rocket grounding receptacle to reduce hazard for ground personnel. Also revising armament control system to prevent inadvertent and/or "Out-of-sequence" door and launcher operation. Make provision for testing and automatic dimming of missile mis-fire light

Limitation: No mis-fire light dimming provision. Extra precautions should be taken by ground personnel to follow instructions issued.

4. PART B (Cont)

Description: Two Second Chute Deployment
ACA 8-808
Remarks: Contractor working with chute vendor to provide a two-second deployment chute
Limitation: None

Description: Radome Anti-Ice System
ACA 8-13828
Remarks: Present Anti-Ice Distribution ring found inadequate in tests
Limitation: Reduced radar capability during icing conditions

Description: Air Conditioning - Ground Operation
ACA 8-689, 8-809, 8-699, 8-15281, 8-14606, 8-14621, 8-14643, 8-14521, 8-14628, 8-14714, 8-15083, 8-15178
Remarks: Insufficient air flow to cockpit when using ground air conditioning equipment. Addition of jet pump for cooling electronic equipment permits usage of refrigeration package air for cooling cockpit. In addition, ACA 8-809 provides for quarter open canopy for cockpit comfort during ground maneuvering.
Limitation: Uncomfortable cockpit during extended operation on the ground during extreme ambient conditions.

Description: Boundary Layer Bleed Duct - Manifolding.
ACA 8-798, 8-14301
Remarks: Vibration encountered at high speed when ram air valve is closed. Correction is accomplished by manifolding left and right hand boundary layer bleed ducts together to provide continuous flow. ACA 8-14301 is an interim fix.
Limitation: If interim fix ACA 8-14301 has not been incorporated, possibility of vibration at speeds above 350 knots if ram air valve malfunctions or is intentionally closed during missile firing.

Description: Canopy De-Fog
ECP 1001, ECP 1076, ACA 8-14588
Remarks: Stretched, tinted and electrically de-fogged glass not available, but corrective action provides for ship wiring to accommodate Nesa glass when available. ECP 1076 is an interim fix providing hot air canopy de-fog.
Limitation: Without one or the other fix installed, flight visibility under certain conditions is reduced

4. PART B (Cont)

Description: Main Intake Duct Leading Edge Anti-Icing ACA 8-634
Remarks: Initial design and fabrication render anti-icing leading edge marginal.
Limitation; No operation in heavy icing conditions

Description: Speed Brake Effectiveness ACA 8-812
Remarks: It appears desirable to increase size of speed brakes for greater effectiveness.
Limitation: None

Description: High Level of Vibration and Noise (Buzz). ACA 8-813
Remarks: Due to boundary layer separation ahead of the main engine air inlet ducts the above buzz conditions prevail.
Limitation: None (condition imposes its own limitations due to severity at Mach 1.3).

Description: 2" DIA. Rocket Installation ACA 8-15210, 8-820, 8-843, 8-14842
Remarks: Request by the Customer to go to 2" DIA rockets. These changes provide for interim installation of a total of 24 rockets in the doors. Further installation of a total of 36 rockets for the doors will be as provided and scheduled by ECP 1037.
Limitation: None

Description: Launcher System Snubbing. ACA 8-648
Remarks: It is possible to operate system by ground crew without snubbing pressure in the cylinder. Correction adds restrictor valves between selector valves and pressure switches.
Limitation: Until corrective action has been taken mechanic must select correct valve position prior to pressurizing system.

Description: One second Armament Launcher Extension. ACA 8-722
Remarks: The present system installed gives four second extension. This change will reduce the extension time to one second.
Limitation: Reduced "Kill Probility".

4. PART B (Cont)

Description:	Nose Landing Gear Door Cylinder. ACA 8-797
Remarks:	Uplock mechanism design recently discovered to be marginal. Failure to lock in up position may occur after relatively short service life. New cylinder design corrects this deficiency.
Limitation:	None. If cylinder fails to uplock, unsafe gear warning light will notify pilot.
Description:	Improved Fuel System. Ref. ACA 8-708, 8-795, 8-14834, 8-14942, 8-15062, 8-14764
Remarks:	Provides fuel flow joiner in tank to engine fuel system to equalize the flow quantitywise. This insures equal depletion from both sides and eliminates present necessity of pilo to maintain lateral balance with boost pump switch control. Also, provides twin boost pump installation to pick up fuel in all attitudes of flight, thus decreasing amount of unusable fuel.
Limitation:	Until accomplished pilot must monitor fuel quantity to maintain equal distribution. Also, until twin boost pumps are installed, alternate dives and climbs and similar maneuvers with low fuel quantity is restricted as provided for in handbooks.
Description:	Fuel Tank Negative "G" Vent Valve (Ref. ACA 8-14514, 8-14600)
Remarks:	At present fuel will tend to vent overboard during maneuvers of less than one "g" positive. This is considered undesirable, especially if armament is fired at same time.
Limitation:	None. Until accomplished solenoid valve is presently installed which shuts off fuel vent valve when missile bay doors are opened.
Description:	Articulated Engine Inlet Fuel Line ACA 8-738
Remarks:	An additional flexible coupling in the fuselage-engine fuel line is considered desirable by the operating agency as a result of the CTCI Board.
Limitation:	None
Description:	J-57 Engine Installation. Ref. ECP's 1002, 101 1031, ACA 8-640, 8-14236NF, 8-479, 8-14611, 8-851, 8-14097, 8-14124, 8-14150, 8-14194, 8-751A

4. PART B (Cont)

Limitation: P-41 Engines not sufficient to perform Phase VI and VII testing.

Description: Canopy Cinch-Down Actuating Mechanism - All Weather Protection - ACA 8-14482, 8-14682, 8-13605, 8-14846, 8-14839, 8-14832
Remarks: With all-weather seal installed on canopy, air spring counter-balance is revised to provide a pull-down force sufficiently to compress the seal and latch the canopy.
Limitation: Parked A/C in rain must be protected against water leakage into cockpit.

Description: Roll Rate Limiter. ACA 8-754, 8-15175, 8-15155 8-15151, 8-15189, 8-15167, 8-15057
Remarks: This change provides a warning to the Pilot when he exceeds a dangerous roll rate by applying high lateral stick forces to return stick to neutral.
Limitation: Roll Rate is limited to 100°/sec. for changes in angle of bank of 90°. See safety Supplement D.

Description: Replace J-8 Attitude Gyro with MM-2 Attitude Indicator ECP 1075, ACA 8-14615, 8-14616, 8-14946, 8-13561, 8-13880, 8-13879, 8-14997
Remarks: The J-8 Attitude Gyro is not reliable and is being changed at Customer request.
Limitation: None

Description: Trim Servo System. Ref. ACA 8-740, 8-12364, 8-14494, 8-14543, 8-14919, 8-359, 8-15101, 8-15124
Remarks: Without Trim Servo System a stable stick force gradient is not available and no pitch trim compensation is provided when speed brakes are operated.
Limitation: None. Airplane difficult to fly on manual or direct manual mode.

4. PART C Work tasks not accomplished on this airplane at time of final delivery shall be referenced in the Air Force Form 263C Part VI.

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-033
DATE 29 Feb 1956
MODEL F-102A

TITLE
REPORT NO. ZD-8-033
DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANE AF S/N 53-1804

CONTRACT AF33(600)-5942

PREPARED BY ______________

GROUP Project Specifications

REFERENCE ______________

CHECKED BY ______________

APPROVED BY ______________

NO. OF PAGES 7

NO. OF DIAGRAMS ______________

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
"A"	12-9-55	WMG	All paragraphs changed	all
"B"	2-16-56	WMG	Date of report changed	all

FORM 1812A-4

This report is prepared to define the condition of the aircraft as of factory completion for conditional acceptance by the Air Force.

PART A:

The following items are deviations from contractural requirements for Model F-102A Airplane, AF Serial No. 53-1804.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposal have been submitted to AMC but which have not been approved as of 8 December 1955, are as follows:

ECP NO. (CAC-F102-)	Title
1020	Landing Gear Warning System - Positive Warning
1022	Elevator - Change from 10° to 8° Down Surface Travel
1031	Pratt & Whitney P-23 Engine Changes - Group II
1087	Constant Speed Drive Oil System - Revision of

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 9 December 1955 but which have not been submitted as of that date are as follows (Paragraph numbers refer to those of Exhibits and Tables of the Contract):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	3-15-56
ZS-8-058	Control System Analysis	1-2-56

EXHIBIT "A": Paragraph (g)
Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbook to be replaced with regular Flight Handbook in March 1956.

3. Equipment listed in the "Equipment Approval Status Record", Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 15 November 1955.

4. PART A The following are shortages at time of factory completion. It is anticipated that these items will be reflected in the Air Force Form 263C Part 2.
(EPD) Expected Part Delivery Date

Quantity	Description	Part No.
4	Seal - Cable & Link Instl. 8-40530 Interim Seal Instld., Vendor to Establish (EPD)	Seal 175
1	Ram-Air Turbine - Tubing-Pres Instl. 8-81306 (EPD 12-15-55)	Tubing & Misc. Pcs.
1	Amplifier Rack-Pitch & Yaw Instl. 8-92933-1 (EPD 12-16-55)	QC 29A-1
1 Ea	Elevon Lockout Valve Instl. 8-81045 (EPD 12-12-55)	VA 1056-1 VA 1056
1	Cooler Installation Instl. 8-22519-3 (GFAE Part No. 660599 Availability to be Determined)	8-22957-7
1	Main Fuel Line Instl. Instl. 8-27401 (EPD 3-2-56)	REG 150-3
Noted	Power Supply Control Amplifiers Instl. 8-36134 (EPD 12-13-55)	2 Ea 463305-110 4 Ea 423106-110 4 Ea 423107-110
2	Tube - Engine Build-up Instl. 8-20395 (EPD 12-12-55)	8-22308
1	Rocket Intervalometer Instl. 8-67186 (EPD 1-2-56)	UN 66-2
1	Missile Intervalometer Instl. 8-67186 (EPD 3-1-56)	UN 120
8	Wing Spar Fuselage Attach Bolts Instl. 8-10030, Sht 1 Chg H (EPD Pending A. F. Approval)	MS 20010-34

4. PART A (Cont.)

Quantity	Description	Part No.
1	Actuator Harness Instl. 8-68966 (Interim Actu. 13-7 Instld.) (EPD 12-16-55)	UN 110-5
1	Armament Control System Instl. ACA 8-15529 (EPD 12-12-55)	LI 320
1 Ea	Constant Speed Drive Oil System Instl. ACA 8-15402	FI 23-5
1	Windshield Anti-Ice Circuit Instl. ACA'S 8-653 & 8-15496 (Vendor To Furnish (EPD))	TRA 294

4. PART B Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or the intended usage.

Description: Pilot Assist - Operation Of
(Ref. ACA 8-754, 8-777, 8-884)

Part No:
1. Suitable Pitch "G" Limiter
2. Suitable Roll Coupling Limiter
   (Ref. ACA 8-754 and 8-884)
3. Low Force Lockout Valves CVAC
   #VA 1056 & VA 1056-1
   (Ref. ACA 8-777)

Quantity: One Each (EPD 12-14-55)

Limitation: Item 2 must be Flight Tested prior to activation of pilot assist. Until Item 1 is installed, pilot assist will be operated only with the following elevator limit switch settings; ± 2.3° above 15,000 feet or below M=0.6; ± 1.0° above M=0.6 at altitudes below 15,000 feet. Until item 3 is installed, forces required for, and surface transients resulting from, the PA manual over-ride feature are excessive. Manual over-ride should be attempted only as a last resort.

4. PART B (Cont.)

Description: Pitch and Yaw damper operation.

Part No: Suitable pitch "G" limiter.

Quantity: One

Limitation: Without a pitch "G" limiter, pitch damper system shall not be used below 15,000 feet altitude.

Description: Missile Intervalometer Installation (Ref. ECP 1034)

Part No: CVAC UN 120 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing Missiles of opening doors in the Missile Mode.

Description: Rocket Intervalometer Installation (Ref. ACA 8-12792)

Part No:
1. CVAC UN 66-2 Intervalometer
2. CVAC REL 293 Relay

Quantity: One each

Limitation:
1. Must be installed prior to firing rockets or opening doors in the rocket mode.
2. Until installed, there will be no remote control for Armament Bay Doors and Launchers. Extreme caution should be used if live arms are carried.

Description: Armament Control System Revision of (Ref. ACA 8-15529)

Part No: CVAC LI 320

Quantity: One each

Remarks:
1. LI 320 replaces mis-fire light with one that can be tested and dimmed.

4. PART B (Cont.)

Limitation: 1. Missile mis-fire light cannot be tested or dimmed.

Description: Fuel Flow Joiner (Ref. ACA 8-708)

Part No: CVAC REG 150-3

Quantity: One

Remarks: Provides fuel flow joiner in tank to engine fuel system to equalize the flow quantity-wise. This insures equal depletion from both sides and eliminates present necessity of pilot to maintain latoral balance with boost pump switch control.

Limitation: Until accomplished, pilot must monitor fuel quantity to maintain equal distribution.

Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15402)

Part No: (CVAC FI 23-5 and GFAE Part No. 660599)

Quantity: One each

Limitation: Until ACA 8-15402 is accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. power may occur.

Description: Take-off Trim Position (Ref. Differential Linkage Installation ACA 8-500)

Part No: CVAC UN 110-5

Quantity: One

Remarks: Interim substitution of elevator trim actuator ACTU 13-7 (Per TVA 41411 on Dwg. 8-49346) for UN 110-5 imposes the following limitation.

Limitation: Until such time that interim ACTU 13-7 is replaced by UN 110-5, pilot must trim elevator from stick button to some position above 5

4. PART B (Cont.)

Limitation: (Cont.) degrees UP before take-off trim circuit will function as designed.

Note: Elevator will not trim to 5 degrees UP position on take-off trim circuit if starting position is less than 5 degrees up. Installation of UN 110-5 lifts the limitation.

Description: Windshield Anti-Ice Circuit -- Add transformers, revise wire gauges and circuits, etc. to increase wattage on NESA glass (Ref. ACA 8-653 and 8-15496).

Part No: CVAC TRA 294

Quantity: Two

Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the windshield free of ice.

Limitation: The airplane should not be flown in icing conditions until ACA 8-653 and 8-15496 have been incorporated. Also, de-fog may not be provided under extreme conditions.

Description: Wing Spar Fuselage Attach. Bolts.

Remarks: Temporary load factor limitations as a result of installation of P/N MS 20010-34 wing spar fuselage attach. bolts (wing spar No. 6) until optimum bolt is approved.

Limitation: The airplane is temporarily limited to the following:

Symmetrical Maneuvers

1. Normal load factor + 4.7g maximum

Asymmetrical Maneuvers

1. Normal load factor + 3.1g maximum
2. Roll rate limited to 100°/sec. for changes in angle of bank of 100°.

4. PART B (Cont.)

3. Aileron angle is restricted to ± 3.3° (1/2 throw) for all speeds above 420 knots calibrated airspeed for altitudes below 12,000 feet.

Limitations on A/C 53-1804 due to instrumentation requirements, are as follows:

Description:	Armament System, deletion of trigger switch wiring (Ref. TVA IN-37228).
Remarks:	Trigger switch used for instrumentation record switch. Safety precaution - to prevent opening of missile bay doors in flight.
Limitation:	1. No firing of armament. 2. No opening of missile bay doors during flight.
Description:	Center Missile Bay Armament, deletion of (Ref. TVA IN-40801, IN-40802, IN-40270)
Remarks:	Deleted center missile bay armament, forward and aft, to provide room for instrumentation equipment.
Limitation:	No firing of armament

4. PART C Work tasks not accomplished on this airplane at time of final delivery shall be referenced in the Air Force Form 263C Part VI.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 31 December 1955.

6. List of items not proven to be interchangeable on this airplane at time of final acceptance on 22 December 1955:

Rudder Nose Door	8-15016-39 8-15016-41 8-15016-43
Wing Leading Edge Panel Assy	8-17230-27 8-17230-28 8-17230-29 8-17230-30 8-17330-31 8-17230-32 8-17230-33 8-17230-34 8-17230-35 8-17230-36
Wing Leading Edge Assy	8-17232-1 8-17232-2
Wing Leading Edge Assy	8-17233-1 8-17233-2
Wing Leading Edge Assy	8-17234-1 8-17234-2
Wing Leading Edge Assy	8-17235-1 8-17235-2
Wing Leading Edge Assy	8-17236-1 8-17236-2
Wing Tip Assy	8-17900-9 8-17900-10
Nose Radome Assy	8-70410
ATM Access Door Assy	8-72601-19
Electronic Purge Valve Inspection Door	8-73433-79
Tailcone Assy	8-73490
Mid-Electronic Door Assy	8-73608-25
Speed Brake Door Assy	8-73614-3 8-73614-4

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 31 December 1955.

6. List of items not proven to be interchangeable on this airplane at time of final acceptance on 22 December 1955:

Rudder Nose Door	8-15016-39 8-15016-41 8-15016-43
Wing Leading Edge Panel Assy	8-17230-27 8-17230-28 8-17230-29 8-17230-30 8-17330-31 8-17230-32 8-17230-33 8-17230-34 8-17230-35 8-17230-36
Wing Leading Edge Assy	8-17232-1 8-17232-2
Wing Leading Edge Assy	8-17233-1 8-17233-2
Wing Leading Edge Assy	8-17234-1 8-17234-2
Wing Leading Edge Assy	8-17235-1 8-17235-2
Wing Leading Edge Assy	8-17236-1 8-17236-2
Wing Tip Assy	8-17900-9 8-17900-10
Nose Radome Assy	8-70410
ATM Access Door Assy	8-72601-19
Electronic Purge Valve Inspection Door	8-73433-79
Tailcone Assy	8-73490
Mid-Electronic Door Assy	8-73608-25
Speed Brake Door Assy	8-73614-3 8-73614-4

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-033
DATE 29 Feb 1956
MODEL F-102A

TITLE
REPORT NO. ZD-8-033
DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANE AF S/N 53-1804
CONTRACT AF33(600)-5942

PREPARED BY ______

GROUP Project Specifications

REFERENCE ______

CHECKED BY ______

APPROVED BY ______

NO. OF PAGES 7

NO. OF DIAGRAMS ______

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
"A"	12-9-55	WMG	All paragraphs changed	all
"B"	2-16-56	WMG	Date of report changed	all
"C"	2-22-56	DDF	Revised & Rewritten	all

FORM 1812A-4

This report is prepared to define the condition of the aircraft as of factory completion for acceptance by the Air Force.

The following items are deviations from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1804.

1. PART A Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposal have been submitted to AMC but which have not been approved as of 20 February 1956, are as follows:

ECP NO. (CAC-F102-)	Title
1087	Constant Speed Drive Oil System - Revision of

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 29 February 1956 but which have not been submitted as of that date are as follows (Paragraph numbers refer to those of Exhibits and Tables of the Contract):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	3-15-56
ZS-8-058	Control System Analysis	3-7-56

EXHIBIT "A": Paragraph (g)
Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbook to be replaced with regular Flight Handbook in March 1956.

3. Deleted.

4. PART A The following are shortages at time of factory completion. It is anticipated that these items will be reflected in the Air Force Form 263C Part 2.
(EPD Expected Part Delivery Date)

4. PART A (Cont.)

Quantity	Description	Part No.
1	Valve, Recirculating Oil Instl. 8-22947 GFAE Part No. 660599 (EPD 4-2-56)	8-22947-7
1	Door Instl. - Speed Brake Instl. Dwg. 8-73674 8-73634-3) Installed 8-73634-5) (EPD 3-15-56)	8-73674-73 8-73674-75
1	Intervalometer - Rocket Equip. Instl. Instl. Dwg. 8-67186 (EPD 2-20-56)	UN 66-2
1	Intervalometer - Missile Equip. Instl. Instl. Dwg. 8-67186 (EPD 3-20-56)	UN-120

4. PART B Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or the intended usage.

Description: Pilot Assist - Operation of (ACA 8-16862, 8-17186, TVA 46117 Change "D" on Dwg. 8-60755 and TVA 46539 on Dwg. 8-60010.)

Limitation:

1. Pilot assist is deactivated until the above mentioned ACA's and TVA's are accomplished.
2. Upon activation of pilot assist by incorporation of the above ACA's and TVA's, pilot assist is restricted to altitude above 25,000 feet at Indicated Air Speeds below 360 knots.

   Note: Elevator limit switches must be set at ±2.3°.

Description: Roll maneuver limitations.

Limitation: The roll restrictions with or without the side slip feedback system operative are:

4. PART B (Cont.)

Limitation: (Cont.)

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
    a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight.)
    b. Do not exceed 80° per second for 360° rolls.
    c. Uncoordinated maneuvers are prohibited.
2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction:

    0 to 3.75g.

Description: Pitch and Yaw Damper Operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a Pitch "G" Limiter, Pitch Damper System shall not be used below 12,000 feet altitude at speeds above 480 knots.

Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15402, 8-16070, 8-15709)

Part No: GFAE #660599

Quantity: One

Limitation: Until the above referenced ACA's are accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. power may occur.

4. PART B (Cont.)

Description: Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against drawing 8-60674 deactivates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

Description: ACA 8-14914. Wing attach bolts Spar Six- Interim use of MS type.

Part No: MS 20010-34 (8 pieces per airplane)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.

Limitation:

a. Symmetrical Maneuvers -

   Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers

   1. Do not exceed normal load factor of 3.9g maximum.
   2. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight.)
   3. For asymmetrical Maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

4. PART B (Cont.)

Description: Trim Servo - Operation of

Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.

Limitation: Do not engage trim servo at altitude less than 5000 feet above the terrain.

Description: Missile Intervalometer Installation (Ref. ECP 1034)

Part No: CVAC UN 120 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing missiles or opening doors in the Missile Mode.

Description: Rocket Intervalometer Installation (Ref. ACA 8-12781 NF)

Part No: CVAC UN 66-2 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing rockets or opening doors in the rocket mode.

Limitations on A/C 53-1804 due to instrumentation requirements, are as follows:

Description: Armament System, deletion of Trigger Switch wiring (Ref. TVA IN-37228)

Remarks: Trigger switch used for instrumentation record switch. Safety precaution - to prevent opening of missile bay doors in flight.

4. PART B (Cont.)

Limitation:	1.	No firing of armament
	2.	No opening of missile bay doors during flight.

Description: Center Missile Bay Armament, deletion of - (Ref. TVA IN-40801, IN-40802, IN-40270)

Remarks: Deleted center missile bay armament, forward and aft, to provide room for instrumentation equipment.

Limitation: No firing of armament.

4. PART C Work tasks not accomplished on this airplane at time of final delivery shall be referenced in the Air Force Form 263C Part VI.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 20 February 1955.

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-012
DATE 31 Dec. 1955
MODEL YF-102

TITLE

REPORT NO. ZD-8-012
LIST OF WAIVERS
FROM CONTRACTUAL REQUIREMENTS
FOR
YF-102 AIRPLANE AF S/N 53-1783
CONTRACT AF33(600) -5942

PREPARED BY

GROUP Project Specification

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES 5

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
"A"	12/31/55	WMG	All Pages Changed	All

FORM 1812 A-4

ANALYSIS
PREPARED BY
CHECKED BY
REVISED BY "A"

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

PAGE 1
REPORT NO. ZD-8-012
MODEL YF-102
DATE 31 Dec. 1955

This report is prepared to define the condition of the airplane at time of delivery to the Air Force for final acceptance.

PART I:

The following items are deviations from contractual requirements for Model YF-102 Airplane, AF Serial No. 53-1783.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 31 December 1955, are as follows:

ECP NO. (CAC-YF-102)	TITLE
201	DELETION OF EQUIPMENT NOT ESSENTIAL TO FLIGHT TEST PROGRAM

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to December 19, 1955, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "B" PART I

Paragraph (A) 2. Ejectable Pilot Cockpit Capsule. (Decision made 2/25/55 to request deletion from contract.)

Paragraph (A) 8. Dynamic Stability and Complete Loop Study.

It is anticipated that Convair Report ZU-8-016 which fulfills the above requirement will be submitted during February 1956.

Paragraph (B) 5. Spin Test Program (NACA). (Decision was made 2/25/55 to request deletion from contract.)

Paragraph (B) 13. Pilot Ejection Capsule.

a. Low Speed Test

b. High Speed Test±

(Decision made 2/25/55 to delete this entire requirement from contract.)

EXHIBIT "B" PART I (Cont)

Paragraph (C) 4. Structural Tests

b. Wing Skin Wrinkling

d. Tests of Shear Type Camloc Repair

e. Dive Brakes, Armament Doors, Elevons & Rudders

g. Sandwich Construction (Door & Wing)

Structural testing as outlined in Exhibit "B", Part I paragraph 4 (a) thru (h) has been partially completed on certain requirements. It is understood, however, that the testing as accomplished does not entirely represent the airplane being accepted. Convair Engineering personnel and Air Force personnel have discussed the desirability of deleting this requirement from the contract.

Paragraph (C) 7. Pressurization Heating & Ventilating Test Stand Summary

Convair Report RT-148, which complies with the above, will be submitted during the month of January 1956.

3. EXHIBIT "A" as amended by Change Order No. 35

(b) Stress Analysis

ECP 200 outlines the stress analysis requirements as follows:

Paragraph (a) Stress Analysis - Basic stress already furnished need not be kept up-to-date. Basic stress analysis not yet submitted for the Model YF-102 airplanes need not be submitted. In lieu, thereof, a Strength Evaluation Report will be submitted.

It is anticipated that the above mentioned report will be submitted on or before August 1956.

3. EXHIBIT "A" - (Cont)

Equipment listed in the "Equipment Approval Status Record", Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 19 December 1955.

4. PART A

The following are shortages to the airplane at time of final acceptance by the Air Force. It has been jointly agreed by Air Force and the Contractor that these items of shortage will not be installed in the airplane due to the fact that they are not required to support the airplanes intended usage.

Quantity	Description	Part Number
1	Curtain Assy. (Electrical Equipment Protection)	8-64463,2
1	Card - Airspeed Calibration	AF21-E
1	Card - Compass Correction	AN5823-1
2	Indicator - Position- Surge Bleed Valve	8-06366 (SP-103)
1	Light Assy. - Pilot's Canopy Instrument Warning w/o Dimmer Red	AN3157-6
1	Indicator - Temperature Multi-Function, Electrical-Resistance, Single, -50 to +50°C (Type MS-28008-1)	MIL-I-7075
1	Compass - Coupler Unit, Pilot Assist	RG7042A4
1	Amplifier - Calibrator, Pilot's Assist	EG45A1
1	Rack - Mounting, Amplifier, Pilot Assist	QG28A1
1	Gyroscope - Vertical, Pilot Assist	JG7044A16
1	Rack- Mounting, Compass Coupler Pilot Assist	421071

4. PART A (Cont)

Quantity	Description	Part Number
1	Intervalometer - Rocket	IV200
1	Heat Exchanger	8607880
1	Accessory Drive Unit	8607025 (08253)
1	Compensator (Airspeed)	XPG-7007B5
1	Gyroscope - Rate, Roll, Autostabilization System	XGG13A6
1	Alignment Pin - N.L.G. Steering Damper	A623717
1	Gyroscope - Rate, Pitch, Autostabilization System	XGG13A5

4. PART B

Flight limitations for this airplane are as follows and as may be noted in the Utility Flight Handbook.

NOTE: There are no flight limitations on this airplane due to the shortages noted in Paragraph 4, Part A of this report. Only those flight limitations which are noted in the Utility Flight Handbook and its supplements apply to this airplane.

4. PART C

Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263c Part VI.

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION

SAN DIEGO

REPORT ZD-8-012
DATE 1 July 1955
MODEL YF-102

TITLE

REPORT NO. ZD-8-012
LIST OF WAIVERS
FROM CONTRACTUAL REQUIREMENTS
FOR
YF-102 AIRPLANE AF S/N 53-1783
CONTRACT AF33(600)-5942

PREPARED BY ______________________

GROUP Project Specification

REFERENCE ______________________

CHECKED BY ______________________

APPROVED BY ______________________

NO. OF PAGES ____________

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REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

FORM 1812 A-4

ANALYSIS
PREPARED BY
CHECKED BY
REVISED BY

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

PAGE 1
REPORT NO. ZD-8-012
MODEL YF-102
DATE 1 July 1955

This report is prepared to define the condition of the aircraft as of final AF acceptance on 1 July 1955. This report supersedes preliminary report No. ZD-8-012 dated 9 July 1954.

ANALYSIS
PREPARED BY
CHECKED BY
REVISED BY

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

PAGE 1
REPORT NO. ZD-8-012
MODEL YF-102
DATE 1 July 1955

Part I:

The following items are deviations from contractual requirements for Model YF-102 Airplane, AF Serial No. 53-1783.

1. Engineering changes which have been incorporated in this Airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 30 June 1955, are as follows:

ECP No. (CAC-YF102-)	TITLE
201	DELETION OF EQUIPMENT NOT ESSENTIAL TO FLIGHT TEST PROGRAM

2. List of required flight tests that have not been accomplished on any Airplane as of 1 July 1955. (NONE)

3. Engineering data listed in exhibit of the contract which were required to be submitted prior to 30 May 1955 but which had not been submitted as of that date, are as follows: (Paragraph numbers refer to those of contract exhibit).

Exhibit B Part I	Exhibit B Part II
(A) 6	(C) 1. (d) Flight testing
(C) 4 (B)	ZU-8-018
(C) 7	ZU-8-019

4. Equipment listed in "Industry Developed Equipment Qualification Approval Status Report" Report No. ZM-8-091 dated 19 February 1954, revised 21 September 1954, which is installed in the Airplane, certain of which have been approved and certain of which have not been approved as of 1 July 1955.

5. List of castings, Report No. ZM-8-113 revised 4 March 1955, all castings approved as of 1 July 1955.

6. PART A Shortages as listed in Air Force Form 263C, Part II which affect the performance or mission of the Airplane as noted. (NONE)

PART B Shortages listed in Part II of AF Form 263C which do not affect the performance or mission of this Airplane.

(See pages 2 through 19)

FORM 1018-A

PART C Shortages and work tasks not accomplished on this Airplane as of 1 July 1955 due to the configuration as defined by its intended useage.

(See attached Exhibit "A" to this report)

7. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing material used on this Airplane which were not approved as of 1 July 1955.

ANALYSIS
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MODEL F-102
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EXHIBIT "A" TO REPORT NO. ZD-8-012

Parts listed in this section were removed from this airplane at the time of factory completion. They were removed for instrumentation installations which were required for specified testing. These parts have been packaged and forwarded to the Air Force at San Antonio, Texas (SAAMA).

Quantity	Description	Part Number
1	Seal	P&W 199065
1	Hose Assy	P&W 216906
1	Seal	P&W 213546
1	Tube Assy	P&W 227872-A7
1	Antenna Assy	8-37528
2	Clip	8-37021-7
1	Box, Conn	AN-3064-20
2	Lock Nut	AN3066-20
1	Coupler	AN3058-20
2	Connector	AN3064-20
3	Lock Nut	AN3066-20
2	Nut Plate	AN256F8
1	Tube Assy	8-38009-29
1	Fitting	Fit 22-115
1	Arm Assy	8-54020-1
1	Arm Assy	8-54028-1
1	Arm Assy	8-54027
1	Arm Assy	8-54029
1	Arm Assy	8-54020-2
1	Arm Assy	8-54028-2
6	Nut	AN320-3
6	Bushing	NAS7 2-9-212
3	Cylinder	CY 121
3	Bolt	AN 3-6
3	Bolt	AN 3-7
6	Nut	AN320-10
6	Nut	AN320-9
6	Washer	NAS143-10
12	Pin	AN381-4-24
6	Pin	AN381-2-12
12	Washer	Q8B3036-2P
6	Washer	NAS143-9
3	Bolt	NAS464-10-31
4	Bolt	NAS464-9-83
3	Bolt	NAS464-10-23
4	Bolt	NAS464-9-85

Quantity	Description	Part Number
3	Arm Assy	8-54027
3	Arm Assy	8-54029
6	Nut	AN320-3
6	Bushing	NAS72-9-212
6	Nut	AN320-10
3	Cylinder	CY 121
3	Bolt	AN3-6
3	Bolt	AN3-7
6	Nut	AN320-9
12	Pin	AN381-4-24
6	Pin	AN381-2-12
6	Washer	NAS143-10
12	Washer	Q8B3036-2P
6	Washer	NAS143-9
3	Bolt	NAS464-10-31
3	Bolt	NAS464-10-23
2	Tube	8-54003-25
1	Fitting	8-54072-11
1	Fitting	8-54072-12
1	Fitting	8-54075-1
1	Fitting Displ. Arm	8-54075-2
16	Nut	AN365-1032
8	Bolt	AN173-15A
8	Bolt	AN173-14A
6	Bolt	AN4-6A
6	Nut	AN365-428
1	Bracket	8-54050-13
1	Channel	8-54299-11
1	Channel	8-54299-13
1	Channel	8-54299-15
1	Channel	8-54299-17
12	Spacer	NAS42HT-6-16
1	Screw Assy	8-54324-803
1	Screw Assy	8-54324-804
1	Screw Assy	8-54324-805
1	Screw Assy	8-54324-807
1	Screw Assy	8-54324-809
1	Filler	8-54200-205
2	Filler	8-54200-207
1	Filler	8-54200-209
2	Filler	8-54200-211
6	Pin	AN393-41
6	Cotter	AN380-2-1

Quantity	Description	Part Number
1	Channel	8-54299-9
1	Channel	8-54299-12
1	Channel	8-54299-14
1	Channel	8-54299-15
1	Channel	8-54299-18
12	Spacer	NAS42HT-6-16
1	Screw Assy	8-543324-803
1	Screw Assy	8-54324-804
1	Screw Assy	8-54324-805
1	Screw Assy	8-54324-808
1	Screw Assy	8-54324-810
1	Filler	8-54200-205
2	Filler	8-54200-207
1	Filler	8-54200-209
2	Filler	8-54200-211
6	Pin	AN393-41
6	Cotter	AN380-2-1
2	Button	8-64317-9
1	Harn	8-64838
1	Harn	8-64839
1	Bracket	8-67354-12
1	Launcher Switch	8-67735
1	Fwd Launcher	8-67736
1	Spacer	8-67386
6	Screw	AN515-8R-36
6	Nut	AN365-832
3	Screw	AN515-8R-26
3	Nut	AN365-832
3	Washer	AN960-8
3	Screw	AN515-8R-26
3	Nut	AN365-832
3	Washer	AN970-8
1	Filler	8-67075-7
3	Screw	AN515-8R-30
3	Nut	AN365-832
3	Washer	AN960-8
1	Launcher Switch	8-67733
6	Screw	AN515-8R-26
6	Nut	AN365-832
6	Washer	AN960-8
3	Screw	AN515-8R-26
3	Nut	AN365-832
3	Washer	AN960-8
3	Screw	AN515-8R-26
3	Nut	AN365-832
3	Washer	AN960-8

Quantity	Description	Part Number
3	Screw	AN515-8R-26
3	Nut	AN365-832
3	Washer	AN960-8
1	Fitting	AN3061-24
1	Nut	AN3066-24
2	Fitting	Fit 63-54
2	Fitting	AN3061-24
2	Nut	AN3066-24
1	Conn.	AN3064-24
1	Nut	AN3066-24
1	Conn.	AN3064-24
1	Nut	AN3066-24
1	Conn.	AN3064-24
1	Nut	AN3066-24
3	Snubber	8-54115
3	Plate	8-54109-11
12	Spacer	NAS43DD-3-38
12	Bolt	AN3-11
12	Nut	AN320-3
24	Washer	AN960FD10L
12	Pin	AN391-2-12
2	Fitting	8-54034-15
2	Fitting	8-54034-17
1	Bracket	8-54039-7
1	Bracket	8-54039-8
1	Bracket	8-54039-7
1	Bracket	8-54039-28
1	Bracket	8-54039-29
1	Bracket	8-54039-30
3	Hook	8-54033
6	Stud	8-54035
3	Link	8-54036
3	Arm	8-54037
3	Block	8-54040
3	Pin	8-54041
6	Spring	8-54123
6	Spacer	NAS43HT-4-21
3	Spacer	NAS43HT-3-70
3	Spacer	NAS43HT-3-64
3	Spacer	NAS43HT-3-46
24	Washer	AN960-D10
6	Bolt	AN3-26A
3	Bolt	AN4-12A
6	Ring	NAS51-18

Quantity	Description	Part Number
3	Bolt	NAS428-3-6
3	Bushing	NAS73-9-011
3	Nut	AN320-9
3	Bolt	AN29-21
1	Bracket	8-54038-10
1	Bracket	8-54038-21
1	Bracket	8-54038-22
1	Bracket	8-54038-23
1	Bracket	8-54038-9
2	Fitting	8-54034-9
1	Fitting	8-54034-11
2	Fitting	8-54034-7
3	Hook	8-54033
6	Spring	8-54123
6	Spacer	NAS43HT4-21
6	Bumper	8-54035
3	Bolt	AN29-21
3	Nut	AN320-9
3	Bushing	NAS73-9-011
3	Spacer	NAS43HT3-70
3	Spacer	NAS43HT3-64
3	Spacer	NAS43HT3-40
24	Washer	AN960-D10
6	Bolt	AN3-26A
3	Arm	8-54037
3	Pin	8-54041
6	Ring	NAS51-18
3	Bolt	NAS4-28-3-6
3	Snubber	8-54115
3	Plate	8-54111-11
12	Spacer	NAS43DD3-38
12	Bolt	AN3-11
12	Nut	AN320-3
24	Washer	AN960 PD10L
12	Pin	AN381-2-12
1	Clip	8-54031-8
1	Clip	8-54031-17
1	Clip	8-54031-18
1	Clip	8-54031-19
1	Clip	8-54031-20
3	Link	8-54036
3	Block	8-54040
2	Bolt	AN173-10A
3	Screw	AN509-10R20
3	Spacer	NAS43-3-32
1	Washer	Q93-2

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Quantity	Description	Part Number
1	Fitting	8-71722-12
1	Fitting	8-71722-13
1	Fitting	8-71722-14
1	Tube	8-70419-97
1	Doubler	8-70450-25
20	Rivet	RIV 392
AR	Sealer	SEALER 80
1	Hose	MS28741-4-160
1	Hose	MS28741-4-134
5	Hose	MS28741-4-134
1	Tube Assy	8-80405-1143
1	Tube Assy	8-80405-1153
1	Tube Assy	8-80405-1157
1	Tube Assy	8-80405-1159
1	Tube Assy	8-80405-1161
1	Tube Assy	8-80405-1163
1	Tube Assy	8-80405-1165
1	Tube Assy	8-80405-1167
1	Tube Assy	8-80405-1169
1	Tube Assy	8-80405-1171
1	Tube Assy	8-80405-1173
1	Tube Assy	8-40405-1175
1	Tube Assy	8-40405-1177
1	Tube Assy	8-80405-1179
1	Support	SUPP 31
2	Tee	AN824-6
1	Ftg	AN-837-6
1	Ftg	AN833-6
1	Hose	MS28741-4-160
2	Union	AN815-6D
1	Fitting	FIT464-5
1	Hose Assy	AN6270-6-10
1	Sealer	Seal 156-3
1	Sealer	Seal 156-4
1	Tube Assy	8-38009-33
1	90° Elbow	AN833-4D
3	45° Elbow	AN837-4D
8	Clamps	MS21919D64
1	Spacer	NAS4300-3-32
1	Hose Assy	MS28741-4-0280
1	Hose Assy	MS28741-4-0240
1	Supp. Bracker	8-87888-15
1	Support Brkt.	8-87888-13
1	Support Brkt.	8-87888-15

PART B Shortages listed in Part II of AF Form 263C shich do not affect the performance or mission of this airplane.

Quantity	Description	Part Number
1	Box	J Box G
2	Bolt	AN7-21
2	Bolt	AN7-31
1	Indicator	P/N38004-N-191
1	Circt Totlr	P/N386018
1	Wires	AN3235-2
1	Bridge	Amplifier #2
16	Bolt	AN3-20A
4	Bolt	AN3-21A
2	Bolt	AN3-24A
8	Bolt	AN3-26A
30	Nut .	AN365-1032
30	Washer	AN960-C10
1	Fitting over valve hole	
1	Airspeed Indicator	Type I
4	Bolt	AN-3-41A
5	Bolt	AN-3-25A
4	Bolt	AN-3-23A
1	Bolt	AN-3-21A
1	Panel Assy	8-02622-1
1	Panel Assy	8-92622-2
1	Panel Assy	8-92622-3
1	Panel Assy	8-92622-4
1	Encl Assy	8-92636-1
1	Encl Assy	8-92636-2
1	Encl Assy	8-92636-3
1	Encl Assy	8-92636-4
1	Cover Assy	SE-0755-801
1	Grill Assy	SE-0587-1
1	Grill Assy	SE-0582-2
1	Bridle Assy	SE-0583
2	Lock Assy	SE-0799
2	Plug Assy	SE-0578
1	Shield Assy	SE-0579-801
4	Lock Assy	SE-0582
1	Bar Assy	SE-0589
1	Ladder Assy	SE-0618-801
2	Plug Assy	SE-0664
2	Lock Assy	SE-0746
1	Lock Assy	SE-0751-801
2	Lock Assy	SE-0634-801
1	Shield Assy	SE-0757-801

Quantity	Description	Part Number
1	Container Assy	8-92643
2	Support Assy	SE-0778-801
1	Tube	8-47117-73
1	Duct Assy	8-87718
1	Angle	8-14401-107
2	Screw	AN520-10RS
2	Nut	AN365-1032
4	Rivet	AF463B-4-7
2	Clip	CLIP 241-1
1	Decal	8-80200
1	Actuator	CYL 75-5
1	Tube Assy	8-20302-753
1	Bolt	AN775-4
1	Elbow	AN778-4D
2	Gasket	AN901-4A
1	Bolt	8-22307
1	Lockwire	AN995-C4710
2	Valve	VA1-112-1J
1	Forging	8-22036-13
1	Forging	8-22036-15
1	Bolt	NAS-464-7-26
1	Washer	AN960-C-716
1	Washer	AN960-C-716L
1	Nut	AN320-7
2	Clamp	CLA 459
2	Pump	PUMP 78-6
1	Angle	8-27934-11
1	Bracket	8-27934-13
1	Doubler	8-27935-7
1	Turbine Assy	8-22001-914
1	Turbine Assy	8-27270-3
1	Plate	8-20200-19
1	Plate	8-20200-21
A/R	Sealer	SEAL 80
4	Washer	Q8C-1520-8
A/R	Grease	GR 18
3	Clamp	MS21919DG8
15	Clamp	MS21919DG32
3	Clamp	MS21919DF16
1	Clamp	MS21919DF18
8	Spacer	NAS 43DD3-24
1	Spacer	NAS 43DD3-42
1	Spacer	NAS 43DD3-48

Quantity	Description	Part Number
1	Clamp	CLA 452-16
1	Clamp	CLA 452-22
2	Clamp	CLA 452-12
1	Fairing Assy.	8-28121
A/R	Sealer	SEAL 80
1	Guard Assy	8-27361
1	Nut	AN365-1032
1	Screw	AN520-1028
2	Valve	VA-774-1
1	Bracket	8-20204-7
1	Clamp	MS28741-4-280
1	Fitting	AN-833-4D
1	Weld Assy	8-20203-7
1	Clip	8-20203-23
2	Clamp	AN735-D24
1	Clamp	MS21919F24
1	Duct	8-27759-11
1	Gasket	8-27660
1	Elbow Assy	8-27661
1	Screen	8-27762
1	Clamp	MS21919DG-8
4	Clamp	MS21919DG-32
1	Calmp	MS21919DF-16
1	Clamp	CLA 452-16
2	Clamp	AN737TW74
2	Spacer	NAS 43-DD3-20
1	Coupling	NAS 521-16-12
4	Rivet	RIV-291-14
4	Washer	AN960-D2
1	Clip	8-27759-7
1	Duct	8-27759-13
1	Gasket	8-27760
1	Elbow Assy	8-27761
1	Screen	8-27762-7
5	Clamp	MS-21919DG-32
2	Clamp	MS-21919DF-16
1	Clamp	CLA-452-12
2	Clamp	AN-737-TW-74
2	Spacer	NAS-43-DD3-20
1	Spacer	NAS-43-DD3-80
1	Coupling	NAS-521-16-12
4	Rivet	RIV-291-14
4	Washer	AN-960-D2
1	Clip	8-27759-7
1	Clip	8-27759-9

Quantity	Description	Part Number
2	Support	8-27992-41
1	Support	8-27992-43
1	Support	8-27992-47
5	Clamp	CA 462-1
41	Cable	CLA 376
2	Conn.	CONN-119-2
4	Conn.	CONN-119
1	Grommet	GRD-19
4	Clamp	AN742-D7
1	Clamp	AN742-D4
8	Nut	AN340-3
92	Nuts	AN364-832C
A/R	Rivets	AN470-AD5
8	Screw	AN515-3R6
92	Screw	AN515-8R6
8	Washer	AN936-A3
1	Clamp	MS21919DG4
1	Spacer	NAS-43DD3-40
3	Spacer	NAS-43DD3-64
6	Cable	CA462-1
2	Support	8-27992-1
8	Support	8-27992-3
15	Support	8-27992-5
7	Support	8-27992-7
42	Support	8-27992-9
3	Support	8-27992-11
10	Support	8-27992-33
3	Support	8-27992-37
22	Clamp	CLA 376
7	Cable	CA462-1
2	Conn.	CONN-119-2
6	Conn.	CONN-119
8	Nut	AN340-3
112	Nut	AN364-832C
8	Screw	AN515-3R6
4	Doubler	8-37716
1	Coupler Assy	8-37503-1
2	Clamp	AN742D11C
1	Clamp	AN742D14C
3	Nut Plate	AN366F1032
2	Screw	AN520-10R10
1	Screw	AN520-10R8
2	Washer	Q8D504-8
1	Assy	8-37503
3	Adapter	8-36625
1	Bracket	8-37722-7
1	Plastic Pnl	8-64553
1	Lite Assy	MS25010-4

Quantity	Description	Part Number
1	Switch	AN-3021-8
1	Lamp	AN-3140-327
3	Screw	AN515-6R12
1	Name Plate	8-38590-9
1	Tube Assy	8-38009-39
1	Tube Assy	8-38009-41
2	Clamp	MS21919DG4
1	Washer	8-38553
1	Fitting	FIT-115-8
1	Fitting	FIT-115-9
1	Assy	8-43228-900
2	Washer	AN960-416L
1	Sleeve	8-43903
1	Pin	AN386-2-15A
1	Washer	AN975-3
1	Nut	AN364-1032
1	Bolt	AN174-144
1	Spring Assy	8-47885-1
1	Rod Assy	8-40105-861
1	Control Box	CONTRA-77-1
1	Support	8-45103-11
1	Screw	AN-509-10R27
1	Screw	AN-509-10R23
1	Control Box	CONTRA-77-1
1	Support	8-45103-12
1	Screw	AN509-10R27
1	Screw	AN509-10R23
1	Block Assy	8-45244
1	Hood Assy	8-45245
1	Block Assy	8-45246
1	Block Assy	8-45248
4	Nut	AN365-632
2	Screw	AN515-6R-30
2	Screw	AN515-6R-48
6	Screw	AN515-8R-10
2	Screw	AN509-10R-24
6	Nut	AN365-832
2	Nut	AN365-1032
12	Washer	AN960-D8
4	Washer	AN960D6L
A/R	Cement	CEM-30-7
A/R	Cement	EC 711
1	Seat	CVAC 46-405
1	Bolt	8-45178
1	Spacer	8-45251
1	Spacer	8-45252
4	Screw	NAS 221-10

Quantity	Description	Part Number
6	Screw	NAS-220-9
1	Seat	CVAC SEA-46-2
1	Spring	#7639
1	Clip	8-45201-55
1	Clamp	AN742-21
1	Bolt	AN3-4A
1	Washer	AN960-D10L
1	Nut	AN264-1032
2	Washer	8-92436
1	Cable Assy	8-44428-1
1	Pil Chute	PARA-10-1
1	Bridle	PARA-10-2
1	Bridle	PARA-10-3
1	Bag	8-44458-11
1	Link Assy	8-45488-1
1	Link Assy	8-45401-1
8	Washer	Q8C752-4
2	Hook Assy	8-44505-1
2	Bolt	NAS 464-5-24
2	Pin	AN395-27
A/R	Washer	AN 960-816L
2	Hook Assy	8-44505-1
2	Bolt	NAS-464-5-24
2	Pin	AN395-27
A/R	Washer	AN960-816L
1	Pedal Assy	8-47264
1	Rud Assy	8-68777-803
2	Eye-Bolt	8-47265-7
1	Eye-Bolt	8-47265-9
1	Angle	8-47265-11
1	Angle	8-47265-13
1	Eye-Bolt	8-47265-15
1	Rod Assy	8-40105-835
1	Support Assy	8-47279-1
1	Support Assy	8-47279-2
1	Bracket Assy	8-47280-1
1	Bracket Assy	8-47282-900
2	Nut	NU 274-5
1	Mount Assy	8-47283
1	Bellcrank Assy	8-47284
1	Brace	8-47285
1	Baffle	8-47286
1	Baffle	8-47287
1	Mount Rudder	8-47288
1	Spring Assy	8-47297
1	Spring	8-47290-7
1	Spring	8-47298

Quantity	Description	Part Number
1	Cont Cable	8-49115
1	Cylinder	CY187
1	Nut	NU 268-4
4	Bolt	AN23-9A
2	Bolt	AN23-8A
2	Bolt	AN4-4A
4	Bolt	AN4-16A
4	Bolt	AN174-10A
2	Bolt	AN174-11A
4	Bolt	AN174-14A
3	Bolt	AN174-15A
3	Bolt	AN174-16A
1	Bolt	AN174-36A
4	Nut	AN363-1032
14	Nut	AN363-428
1	Bolt	NAS 464-4A-40
3	Bolt	AN174-11A
3	Bolt	AN363-428
2	Bolt	AN5-12A
1	Harness	8-68777-805
1	Seal	8-47330-7
1	Loader	8-47334-9
1	Harness	8-68818-805
1	Cylinder Assy	8-47362
1	Rod Assy	8-47406-19
1	Harness	8-68819-803
3	Washer	AN960-1216L
1	Cotter Pin	AN380-2-3
1	Nut	AN310-4
1	Lockring	8-47428
1	Nut	8-47104-7
1	Rod	8-47106-11
1	Washer	8-49882
1	Guard	8-47521-7
2	Rivet	AN470-B-3
1	Frame Assy	8-47783-801
1	Follower	8-49756
1	Cam Throttle	8-49757
2	Washer	AN960D10
2	Bolt	AN3-6A
2	Nut	AN365-1032
12	Washer	AN960-PD-10L
1	Guide	8-47854-9
1	Housing	8-47628-13
1	Plate	8-49796
1	Support	8-49781

Quantity	Description	Part Number
1	Actuator Assy	8-49779
2	Screw	AN515-4R12
2	Nut	AN340-4
2	Washer	AN936-A4
2	Washer	AN960-4
2	Holder Assy	AN5800-1
4	Washer	AN960-PD2L
1	Arm	8-47808-7
1	Trigger	8-49737-7
1	Tube	8-47896-7
1	Crank	8-47836
3	Rivet	Q4310C5
1	Handle Assy	8-47742-19
1	Handle Assy	8-47742-21
1	Handle Assy	8-47742-23
2	Tube	8-47718
1	Washer	8-40106
2	Actuator	ACTU 84-1
1	Bolt	AN174-12A
1	Bolt	AN174-14A
1	Valve	VA 651
1	Actuator Assy	8-47800-7
4	Actuator	ACTU-182
1	Actuator	ACTU-84-2
1	Valve	VA 688
1	Bracket	8-81026-1
1	Washer	8-40106-11
2	Bolt	AN4-13A
A/R	Lockwire	AN995F-32
1	Actuator	AN3168-2
1	Switch Limit	MS 25011-2
2	Bolt	NAS 428H5-14
1	Washer	Q8-H1500-1
1	Yoke Assy	8-47833
1	Rod Assy	8-47802-3
1	Trigger	8-81025
1	Pin	8-81038
A/R	Washer	AN960-4L
A/R	Washer	AN960-4
A/R	Rivet	AN470-B5
2	Cotter Pin	AN380-2-1
1	Valve	VA 688
1	Bracket	8-81026-2
1	Washer	8-40106-11
2	Bolt	AN4-13A
A/R	Lockwire	AN995F32

Quantity	Description	Part Number
1	Actuator	AN3168-2
1	Switch limit	MS 25011-1
2	Bolt	NAS-428H5-14
1	Washer	Q8-H1500-1
1	Yoke Assy	8-47833
1	Rod Assy	8-47802-3
1	Trigger	8-81025
1	Pin	8-81038
A/R	Washer	AN960-4L
A/R	Washer	AN960-4
A/R	Rivet	AN470-B5
2	Cotter Pin	AN380-2-1
1	Valve	VA 651
1	Actuator Assy	8-47800-7
4	Actuator	ACTU-182
1	Actuator	ACTU-84-2
1	Support	8-47834-7
4	Bolt	AN4-7A
1	Support	8-47834-8
4	Bolt	AN4-7A
1	Washer	8-40106
1	Actuator	ACTU 84-2
1	Bolt	AN174-12A
1	Bolt	AN174-14A
1	Cylinder	CY 316-1
1	Actuator	ACTU 84-1-2
1	Cylinder	CY 205
1	Plug	AN31088-18-1P
1	Bolt	NAS 464-4-16
1	Nut	NU220-4
2	Potentiometer	POTE-17
6	Bolt	AN3-6A
6	Nut	AN365-1032
1	Trigger	8-81025
1	Pin	8-81038
1	Bellcrank	8-47993-3
1	Bracket	8-81026-1
1	Washer	8-40106-11
1	Valve	VA-688
1	Bolt	AN4-13A
1	Actuator	AN3168-2
1	Switch	MS 25011
1	Bolt	NAS-428-H-5-14
1	Washer	Q8-H-1500-1
A/R	Lockwire	AN995-F32
1	Nut	AN363-428

Quantity	Description	Part Number
1	Valve	CY 206-3
1	Valve	CY 326-1
1	Bracket	8-81026-13
1	Spring	8-81026-15
1	Trigger	8-81025
1	Pin	8-81038
1	Bellcrank	8-47993-3
1	Bracket	8-81026-2
1	Washer	8-40106-11
1	Valve	VA 688-1
2	Bolt	AN-13A
1	Switch Limit	MS-25011
2	Bolt	NAS 428-H-5-14
1	Washer	Q8-H-1500-1
1	Actuator	316-326-2
1	Actuator	AN3168-2
A/R	Lockwire	AN995F32
1	Nut	AN363-428
1	Bracket	8-81026-14
1	Spring	8-81026-16
1	Stiffener	8-47835-9
1	Support	8-47834-7
1	Brace	8-47804-7
4	Bolt	AN-4-7A
4	Nut	AN363-428
1	Stiffener	8-47835-10
1	Support	8-47834-8
1	Brace	8-47804-8
4	Bolt	AN4-7A
4	Nut	AN363-428
1	Brace	8-49864-7
1	Bellcrank Assy	8-49860
1	Crank Assy	8-49863
1	Support Assy	8-49866-1
1	Support Assy	8-49866-2
1	Bolt	AN174-31A
3	Nut	AN364-428
1	Nut	AN365-428
2	Bolt	NAS 464-4A11
1	Bolt	NAS 464-4A14
1	Bearing Needle	NAS 602-4
A/R	Grease	GRE 21
1	Clip	8-49864-9
1	Mount	8-49865
1	Tee	8-49857
2	Bolt	AN174-10A
2	Bolt	AN174-7A
1	Bolt	AN174-30A

Quantity	Description	Part Number
3	Nut	AN365-428
1	Spacer	NAS 43DD4-99
1	Landing Gear Assy	#538000-503
1	Gear Assy	8-51000-7
1	Gear Assy	8-51000-9
1	Landing Gear Assy	#538000-503
1	Gear Assy	8-51009-7
1	Gear Assy	8-51009-9
1	Cam	8-44506-9
1	Fitting Assy	8-45507-1
1	Fitting Assy	8-45507-2
2	Pin	AN394-31
1	Pin	AN393-25
3	Washer	AN90-10L
1	Cotter Pin	AN380-1-1
1	Cam	8-44506-10
1	Fitting Assy	8-45507-1
1	Fitting Assy	8-45507-2
2	Pin	AN384-31
1	Pin	AN393-25
3	Washer	AN960-10L
1	Cotter Pin	AN380-1-1
1	Lndg Assy	STR7-14-23
3	Harness	8-54255-3
3	Harness	8-54255-5
1	Recept	AN3100E-20-75
1	Recept	RE 64
1	Recept	RE 64
1	Shield	8-64107-7
1	Cont Box	BOX-1-39-1
A/R	Wire	L181BB22
A/R	Wire	L184H22N
1	Lt Assy	MS 25023-1
A/R	Wire	E21E-20
1	Nut-Plt	8-64300-65
1	PNL	8-64276-23
1	Bus Assy	TE130-3
2	Control	CONTR65
1	AMPL	UN35-30-6
1	Cont Box	BOX-114-4
1	Panel	8-64303-13
1	Switch	AN3027-2
1	Lamp	LI-202-2
1	Lt Assy	MS 25023-1

Quantity	Description	Part Number
1	Pnl	8-64380-9
1	Bracket	8-64535-7
1	Grommet	AN931-4-7
1	Screw	AN515-8R6
1	Nut	AN365-832
1	Plate	8-64381-11
1	Plug Button	8-64317-11
A/R	CA324-2-1-22	L141FF228X18
8	Lt. Assy	MS 25023-1
1	Pnl Assy	8-64073-5
1	Angle	8-64456-9
1	Support	8-64458-9
1	Curtain Assy	8-64463-801
2	Plunger	8-64476-7
1	Harn	8-64795
1	Harn	8-64797
1	Brkt	8-64535-7
1	Brkt	8-64535-8
6	Brkt	8-64535-9
3	Brkt	8-64535-10
2	Nut plate	AN366F832
9	Screw	AN515-4R7
9	Nut	AN365-440
A/R	Wire	C-301C20
A/R	Wire	P3DD12
1	Harness	8-64762
1	Plate	8-64327-7
1	Switch	SW 2-12
A/R	Wire	G22E20
A/R	Wire	G94A20
A/R	Wire	X15F20B
A/R	Wire	E22E-20-Topin
A/R	Wire	E23D20Topin
A/R	Wire	C301B20
A/R	Wire	L185D22N
1	Disconnect	CONN 70-1
1	Harn	8-64831
A/R	Wire	F101A16
A/R	Wire	F100F16
1	Plug	AW3106E10SL-45
1	Harn	8-64848
3	Cable	V-55B10NX20
2	Brace	8-67286-13
1	Rectifier	UN 67-1

Quantity	Description	Part Number
1	Pnl Assy	8-67026-805
2	Relay	AN311-1
4	Screw	AN515-8R7
1	Compensator	UN 101
1	Recept	AN3100E-20-75
1	Cable	C118A20X56"
1	Cable	C118A20X61"
2	Dust Cap	8-68259
A/R	Locking Wire	AN795-F32-4
2	Screws	AN500A4-6
1	Wire	C164C22
1	Wire	C165C22
1	Wire	C184C16
1	Cont Box	Box 111
1	Harn	8-67739-801
1	Cable	A210C16X73"
1	Cable	A47A16X73"
1	Plug	PLU 11-67
1	Switch	SW 283-2
1	Mount	8-67739-7
1	Ld Tag	AF 650-6
2	Sleeve	SL 166-10X1
1	Harn	8-67740-803
1	Harn	8-67851-805
1	Harn	3-67849-801
1	Harn	8-67738-803
1	Fitting	AN3061-8
1	Nut Lock	AN3066-8
1	Brkt	8-67344-7
1	Brkt	8-67344-9
1	Harn	8-67737-801
1	Zee	8-67362-13
1	Zee	8-67362-15
1	Cond Assy	8-67359-19
1	Cond Assy	8-67359-21
1	Cond Assy	8-67359-23
1	Cond Assy	8-67359-25
1	Cond Assy	8-67359-27
4	Bolt	AN173-5
1	Gyro Pitch	UN-37
1	Gyro Pitch	UN-37-1
4	Screw	AN5158R14
1	Sw Assy	8-64094-5
1	Assy	8-67201
4	Screw	AN520DD10R7
4	Nut	AN365D1032
1	Harn	8-67722-803
1	Ckt Brkr	MS 25005-5
1	Wire	G3C22

Quantity	Description	Part Number
1	Wire	E22G20
1	Wire	E23F20
1	Wire	E24F20
1	Rack Assy	8-67330-809
1	Harn	8-67881
2	Nuts	AN365-632
1	Pan Assy	8-67338-807
1	Cable	H-1K18
1	Cable	H1L18
1	Cable	H1M18
1	Cable	H3K18
1	Cable	H1N18
1	Cable	H26A20N
1	Cable	H27A20N
1	Cable	H4H18
1	Cable	H3L18
1	Cable	H4G18
1	Cable	A355A20X32
1	Cable	C303A20NX70"
1	Cable	C304A20NX70"
1	Cable	C305A22X65"
1	Wire	C189D22
1	Harn	8-67881
1	Harn	8-67882
1	Limiter	LIM 24-2
4	Nut	AN365-1032
4	Bolt	AN3C5A
2	Pin	TE 130-5
A/R	Tape	TAP 61
A/R	Cord	COR 78
2	Sleeve	SL166X1.5
1	Wire	Q190D22
1	Wire	Q191C22
1	Recept	AN3100E20-75
1	Harn	8-68848-805
1	Harn	8-68854-7
1	Harn	8-68854
1	Harn	8-68860
1	Pad	8-92916-7
1	Support	8-92913-15
1	Plate	8-92913-17
1	Cotter Pin	AN380-3-4
2	Bracket	8-54127-7
2	Bracket	8-65127-8
2	Bracket	8-54128-7
2	Bracket	8-54128-8

Quantity	Description	Part Number
2	Filler	8-54130
16	Rivet	Q4310-C5-10
16	Nut	AN365-1032
16	Bolt	AN3-6A
4	Cover	8-47501-19
1	Fitting	8-45458
1	Chain	NAF 1088-1A-4
1	Pin	PIN 105
2	Cup	8-71635
2	Filler	8-70664-37
A/R	Paint	LAC 25B
6	Bolt	AN3-25A
6	Nut	AN365-1032
12	Washer	AN960-1032
6	Washer	AN960-516
1	Grommet	FAS 202-9
1	Retainer	8-70411-7
1	Retainer	8-70411-8
1	Retainer	8-70411-9
1	Retainer	8-70411-10
1	Retainer	8-70411-11
1	Retainer	8-70411-12
1	Retainer	8-70411-13
1	Retainer	8-70411-14
1	Insert	8-70411-15
1	Insert	8-70411-17
1	Seal	8-70647-7
2	Fitting	8-71760-7
2	Fitting	8-717617
4	Nut	NU-254-5
A/R	Sealer	SEALER 80
16	Nut	AN365-428
2	Bushing	NAS 77-6-22
16	Bolt	NAS 334-PA7
A/R	Rivet	Q4310-64
4	Nut Plate	AN366F524
1	Intercostal	8-67289-7
1	Stiffener	8-70357-29
1	Filler	8-70358-27
1	Stiffener	8-70358-29
2	Assy	8-70509-9
1	Fitting	8-37479
1	Sleeve	8-37513
1	Sleeve	SL 24
1	O-Ring	GA24-3
1	Screw	AN565-D845
1	Nut	AN340-8
4	Screw	AN520-6R4
4	Washer	AN935-66
1	Pitot Tube	AN5816-2

Quantity	Description	Part Number
1	Angle	8-70609-157
1	Angle	8-70609-158
1	Turbine	TURB-33
1	Hose Assy	AN6270-4-12
1	Tube Assy	8-8005-1299
4	Union	AN815-4
1	Tube Assy	8-80005-1285
1	Tube Assy	8-80005-1287
1	Tube Assy	8-80005-1289
1	Tube Assy	8-80005-1291
1	Tube Assy	8-80005-1293
1	Tube Assy	8-80005-1295
1	Tube Assy	8-80005-1297
1	Cross	AN827-4
4	Union	AN815-4
14	Nut	AN818-4
14	Sleeve	AN819-4
1	Tube Assy	8-80005-1301
1	Nut	AN818-4
2	Sleeve	AN817-4
8	Cap	AN929-4
2	Valve	VA 457
1	Tube Assy	8-80007-115
2	Union	AN815-4
1	Tube Assy	8-80007-105
1	Hose	MS 28741-6-0144
2	Reducer	AN919-6
1	Tube	8-80018-7
1	Tube	8-80018-9
1	Tube	8-80018-11
2	Nut	AN818-6
2	Sleeve	AN819-6
4	Nut	AN818-10D
4	Sleeve	AN819-10E
1	Spacer	MS43DD3-32
3	Clamps	MS21919DG6
2	Clamps	MS21919DG10
1	Tube Assy	8-80405-1387
1	Tube Assy	8-80405-1385
1	Tube Assy	8-80405-1389
1	Switch	SW 297-1
1	Tee	AN824-8D
1	Clamp	MS21919DG20
1	Gasket	AN6290-4
1	Reducer	AN919-10D
2	Valve	VA 970
1	O-Ring	AN6290-3
1	Reducer	AN919-2D
1	Union	AN815-3
1	Hose	MS52874-3-146

Quantity	Description	Part Number
1	Tube	8-80412-7
2	Clip	AN743-12
2	Nut	AN818-4
2	Sleeve	AN819-4
2	Clamp	MS21919DG4
1	Spacer	NAS 43DD3-32
1	Tube Assy	8-80601-281
1	Cap	AN329-16
1	Gasket	AN900-9
1	Union	AN815-16
1	Nipple	AN816-10
1	Reservoir Assy	TA 37
1	Reservoir Assy	TA38
2	Regulator	REG 64-2
1	Clip	8-81206-129
1	Clip	8-81206-130
1	Valve	VA 188
1	Regulator	REG-125
2	Valve	VA 1-106-3
1	Clamp	CLA-85-81
1	Gasket	8-87843
1	Airsearch Valve	VA-419-4
1	Thermostat	THER 18-4
1	Valve	VA 397-4
1	Valve	VA 264-2
1	Decal Plate	Q50-5D
1	Turb	TURB 5-4
1	Exchanger	EX 3-4
1	Blanket	INSU 7-10
1	Valve	VA 500
1		THER 18-5
1	Decal Plate	Q50-5D
A/R	Sealer	SEAL 82
2	Pad - Tank Strap	AN8031-6-140
2	Pad - Tank Strap	AN8031-6-060
2	Corprene	COPP10-2
1	Royalite Panel	8-92200-43
1	Royalite Panel	8-92200-45
1	Sleeve	8-92434
1	Screw	AN515-8R12
1	Nut	AN365-832
1	Washer	Q8D502-4
1	Switch	SW 332-1
1	Knob	8-64263-1
1	Switch	AN3021-1
1	Plate	8-64544
1	Plas Plate	8-64552
3	Lt Assy	MS-25010-4

Quantity	Description	Part Number
2	Washer	AN960D516
1	Cable	E21020X30"
1	Cable	E22F20X30"
1	Cable	E23A20X10"
1	Cable	E24E20X30"
1	Cable	L141GG22X10"
1	Cable	L141HH22X10"
1	Cable	L141JJ22X10"
1	Cable	E21B20X10"
1	Cable	E23A20X30
1	Wire	V50E20
A/R	Cement	CEM #35-1
2	Spring	8-92922-9
1	Sleeve	8-92405

CONSOLIDATED VULTEE

DIVISION San Diego
MODEL YF-102

REPORT ZD-8-012
DATE 9 July 1954

TITLE

REPORT NO. ZD-8-012

LIST OF WAIVERS

FROM CONTRACTUAL REQUIREMENTS

FOR

YF-102 AIRPLANE AF S/N 53-1783

CONTRACT AF33(600)-5942

PREPARED BY

GROUP Specification

REFERENCE

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NO.	DATE	BY	CHANGE	PAGES AFFECTED

GD 241A

The following items are waivers from contractual requirements for Model YF-102 airplane, AF Serial No. 53-1783:

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 9 July 1954, are as follows:

ECP No. (CAC-F102-)	Title
49 Rev	Windshield Cleaners - Change of
58	263 Equipment - Addition of
77	Miscellaneous Specification Deviations and Corrections
87	Hydraulic Pressure Gage Light - Change of
89	Engine Compartment Sealant-Change of
93	Engine Ice Detector Installation - Change From Hairpin to Probe Type
95	Temperature Sensing Bulb-Change of
98	Anti-"G" Suit Valve-Change of
103	Compressor Bleed Governor Seal Drain - Inst'l of
104	Exhaust Nozzle Control Seal Drain - Inst'l. of
105	Combustion Chamber Fuel Drain Line - Inst'l of
106	High Pressure Bleed Duct-Revision of
131	Engine Pump Low Pressure Warning Switch - Relocation of
151	Miscellaneous Specification Deviation and Corrections

2. Instrumentation as outlined in Convair Instrumentation Report No. ZC-8-057 dated 1 April 1954, Revision 1 dated 15 May 1954 with wiring addendum dated 1 May 1954

The following items are waivers from contractual requirements for Model YF-102 airplane, AF Serial No. 53-1783:

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 9 July 1954, are as follows:

ECP No. (CAC-F102-)	Title
49 Rev	Windshield Cleaners - Change of
58	263 Equipment - Addition of
77	Miscellaneous Specification Deviations and Corrections
87	Hydraulic Pressure Gage Light - Change of
89	Engine Compartment Sealant-Change of
93	Engine Ice Detector Installation - Change From Hairpin to Probe Type
95	Temperature Sensing Bulb-Change of
98	Anti-"G" Suit Valve-Change of
103	Compressor Bleed Governor Seal Drain - Inst'l of
104	Exhaust Nozzle Control Seal Drain - Inst'l. of
105	Combustion Chamber Fuel Drain Line - Inst'l of
106	High Pressure Bleed Duct-Revision of
131	Engine Pump Low Pressure Warning Switch - Relocation of
151	Miscellaneous Specification Deviation and Corrections

2. Instrumentation as outlined in Convair Instrumentation Report No. ZC-8-057 dated 1 April 1954, Revision 1 dated 15 May 1954 with wiring addendum dated 1 May 1954

3. List of required flight tests, revised 16 June 1954, that have not been accomplished on any airplane as of 9 July 1954.

4. List of parts or equipment, or both, temporarily installed or parts for which installation is postponed as of 18 June 1954.

5. Engineering data listed in exhibit of the contract which were required to be submitted prior to 9 July 1954 but which had not been submitted as of that date, are as follows (paragraph numbers refer to those of the Contract Exhibit):

Exhibit B, Part I	Exhibit B, Part II
(A) 6	(C) Flight Testing ZU-8-013
(B) 14	
(C)1(a)	
(C)1(c)	
(C)3(c)	
(C)1(d)	
(C)2	
(C)4(b)	
(C)7	

6. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-090 dated 19 February 1954, revised 10 June 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 9 July 1954.

7. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, revised 25 May 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 9 July 1954.

8. List of castings, revised 29 June 1954, listing castings used on this airplane, certain of which have approved standards and certain of which do not have approved standards as of 29 June 1954.

9. Shortages as listed in Air Force Form 263C, Part II.

10. List of unaccomplished Air Force Inspection Discrepancies revised 9 July 1954.

11. List of incompleted manufacturing functions (for example, installations or operations due to shortages) as of 28 June 1954.

12. List of Materials, revised 17 May 1954, listing materials used on this airplane which were not approved as of 9 July 1954.

CONSOLIDATED VULTEE

DIVISION San Diego

MODEL YF-102

REPORT ZD-8-013

DATE 21 July 1954

Revised 31 August 1954

TITLE

REPORT NO. ZD-8-013

LIST OF WAIVERS

FROM CONTRACTUAL REQUIREMENTS

FOR

YF-102 AIRPLANE AF S/N 53-1784

CONTRACT AF33(600)-5942

PREPARED BY

GROUP Specification

REFERENCE

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GD 241A

The following items are waivers from contractual requirements for Model YF-102 airplane, AF Serial No. 53-1784:

1. Engineering changes which have been incorporated in this Airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 26 August 1954, are as follows:

ECP No. (CAC-F102-)	Title
58	263 Equipment - Addition of
87	Hydraulic Pressure Gage Light - Change of
89	Engine Compartment Sealant-Change of
93	Engine Ice Detector Installationn-Change From Hairpin to Probe Type
95	Temperature Sensing Bulb-Change of
96	Deletion of Residual Heat Doors
133	Windshield Anti-Icing Syst. - Rev. To
151	Miscellaneous Specification Deviation and Corrections
176	GFAE-Cor. of Misc. Aerno No.'s

2. Instrumentation as outlined in Convair Instrumentation Report No. ZC-8-058 dated 1 June 1954, with wiring addendum dated 1 June 1954.

3. List of required flight tests, revised 25 August 1954, that have not been accomplished on any airplane as of 26 August 1954.

4. List of parts or equipment, or both, temporarily installed or parts for which installation is postponed as of 26 August 1954.

5. Engineering data listed in exhibit of the contract which were required to be submitted prior to 26 August 1954 but which had not been submitted as of that date, are as follows (paragraph numbers refer to those of the Contract Exhibit):

Exhibit B, Part I

(A) 6
(B) 14
(C)1(a)
(C)1(c)
(C)3(c)
(C)1(d)
(C)2
(C)4(b)
(C)7
(C)1(b)
(C)3(d)

Exhibit B, Part II

(C) Flight Testing ZU-8-013

(B) Prel. Weapons Effect on Gust ZU-8-004

6. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-090 dated 19 February 1954, revised 10 June 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 26 August 1954.

7. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, revised 25 May 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 26 August 1954.

8. List of castings, revised 29 June 1954, listing castings used on this airplane, certain of which have approved standards and certain of which do not have approved standards as of 26 August 1954.

9. Shortages as listed in Air Force Form 263C, Part II.

10. List of unaccomplished Air Force Inspection Discrepancies revised 30 August 1954.

11. List of incompleted manufacturing functions (for example, installations or operations due to shortages) as of 26 August 1954.

12. List of Materials, revised 17 May 1954, listing materials used on this airplane which were not approved as of 26 August 1954.

CONSOLIDATED VULTEE

DIVISION San Diego

MODEL YF-102

REPORT ZD-8-013

DATE 21 July 1954

TITLE

REPORT NO. ZD-8-013
LIST OF WAIVERS
FROM CONTRACTUAL REQUIREMENTS
FOR
YF-102 AIRPLANE AF S/N 53-1784
CONTRACT AF33(600)-5942

PREPARED BY ____________

GROUP Specification

REFERENCE ____________

CHECKED BY ____________

APPROVED BY ____________

NO. OF PAGES ________

NO. OF DIAGRAMS ________

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

CO 241A

The following items are waivers from contractual requirements for Model YF-102 airplane, AF Serial No. 53-1784:

1. Engineering changes which have been incorporated in this Airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 16 July 1954, are as follows:

ECP No. (CAC-F102-)	Title
49 Rev	Windshield Cleaners - Change of
58	263 Equipment - Addition of
77	Miscellaneous Specification Deviations and Corrections
87	Hydraulic Pressure Gage Light - Change of
89	Engine Compartment Sealant-Change of
93	Engine Ice Detector Installation - Change From Hairpin to Probe Type
95	Temperature Sensing Bulb-Change of
98	Anti-"G" Suit Valve-Change of
103	Compressor Bleed Governor Seal Drain - Inst'l of
104	Exhaust Nozzle Control Seal Drain - Inst'l. of
105	Combustion Chamber Fuel Drain Line - Inst'l of
106	High Pressure Bleed Duct-Revision of
131	Engine Pump Low Pressure Warning Switch - Relocation of
151	Miscellaneous Specification Deviation and Corrections

2. Instrumentation as outlined in Convair Instrumentation Report No. ZC-8-058 dated 1 June 1954, with wiring addendum dated 1 June 1954.

3. List of required flight tests, revised 16 June 1954, that have not been accomplished on any airplane as of 16 July 1954.

4. List of parts or equipment, or both, temporarily installed or parts for which installation is postponed as of 16 July 1954.

5. Engineering data listed in exhibit of the contract which were required to be submitted prior to 16 July 1954 but which had not been submitted as of that date, are as follows (paragraph numbers refer to those of the Contract Exhibit):

Exhibit B, Part I

(A) 6
(B) 14
(C)1(a)
(C)1(c)
(C)3(c)
(C)1(d)
(C)2
(C)4(b)
(C)7

Exhibit B, Part II

(C) Flight Testing
ZU-8-013

6. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-090 dated 19 February 1954, revised 10 June 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 16 July 1954.

7. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, revised 25 May 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 16 July 1954.

8. List of castings, revised 29 June 1954, listing castings used on this airplane, certain of which have approved standards and certain of which do not have approved standards as of 16 July 1954.

9. Shortages as listed in Air Force Form 263C, Part II.

10. List of unaccomplished Air Force Inspection Discrepancies revised 16 July 1954.

11. List of incompleted manufacturing functions (for example, installations or operations due to shortages) as of 16 July 1954.

12. List of Materials, revised 17 May 1954, listing materials used on this airplane which were not approved as of 16 July 1954.

CONSOLIDATED VULTEE

DIVISION San Diego
MODEL YF-102

REPORT ZD-8-014
DATE 4 August 1954
REVISED 31 August 1954

TITLE

REPORT NO. ZD-8-014

LIST OF WAIVERS

FROM CONTRACTUAL REQUIREMENTS

FOR

YF-102 AIRPLANE AF S/N 53-1785

CONTRACT AF33(600)-5942

PREPARED BY ______

GROUP Specification

REFERENCE ______

CHECKED BY ______

APPROVED BY ______

NO. OF PAGES ______

NO. OF DIAGRAMS ______

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

GD 241A

The following items are waivers from contractual requirements for Model YF-102 airplane, AF Serial No. 53-1785:

1. Engineering changes which have been incorporated in this Airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 26 August 1954, are as follows:

ECP No. (CAC-F102-)	Title
58	263 Equipment - Addition of
87	Hydraulic Pressure Gage Light - Change of
89	Engine Compartment Sealant- Change of
93	Engine Ice Detector Installation - Change From Hairpin to Probe Type
95	Temperature Sensing Bulb - Change of
96	Deletion of residual Heat Doors
133	Windshield Anti-Icing Syst-Rev. of
151	Miscellaneous Specification Deviation and Corrections
176	GFAE Cor. or Misc Aerno No.'s

2. Instrumentation as outlined in Convair Instrumentation Report No. ZC-8-059 dated 15 June 1954 with wiring addendum dated 15 June 1954.

3. List of required flight tests, revised 25 August 1954, that have not been accomplished on any airplane as of 26 August 1954.

4. List of parts or equipment, or both, temporarily installed or parts for which installation is postponed as of 26 August 1954.

5. Engineering data listed in exhibit of the contract which were required to be submitted prior to 26 August 1954 but which had not been submitted as of that date, are as follows (paragraph numbers refer to those of the Contract Exhibit):

Exhibit B, Part I

(A) 6
(B) 14
(C)1(a)
(C)1(c)
(C)3(c)
(C)1(d)
(C)2
(C)4(b)
(C)7
(C)1(b)
(C)3(d)

Exhibit B, Part II

(C) Flight Testing
ZU-8-013

(B) Prel. Weapons
Effect on Gust
ZU-8-004

6. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-090 dated 19 February 1954, revised 10 June 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 26 August 1954.

7. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, revised 25 May 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 26 August 1954.

8. List of castings, revised 29 June 1954, listing castings used on this airplane, certain of which have approved standards and certain of which do not have approved standards as of 26 August 1954.

9. Shortages as listed in Air Force Form 263C, Part II.

10. List of unaccomplished Air Force Inspection Discrepancies revised 30 August 1954.

11. List of incompleted manufacturing functions (for example, installations or operations due to shortages) as of 26 August 1954.

12. List of Materials, revised 17 May 1954, listing materials used on this airplane which were not approved as of 26 August 1954.

CONSOLIDATED VULTEE

DIVISION San Diego

MODEL YF-102

REPORT ZD-8-014

DATE 4 August 1954

TITLE

REPORT NO. ZD-8-014

LIST OF WAIVERS

FROM CONTRACTUAL REQUIREMENTS

FOR

YF-102 AIRPLANE AF S/N 53-1785

CONTRACT AF33(600)-5942

PREPARED BY ____________________

GROUP Specification

REFERENCE ____________________

CHECKED BY ____________________

APPROVED BY ____________________

NO. OF PAGES __________

NO. OF DIAGRAMS __________

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

GD 241A

The following items are waivers from contractual requirements for Model YF-102 airplane, AF Serial No. 53-1785:

1. Engineering changes which have been incorporated in this Airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 4 August 1954, are as follows:

ECP No. (CAC-F102-)	Title
49 Rev	Windshield Cleaners - Change of
58	263 Equipment - Addition of
77	Miscellaneous Specification Deviations and Corrections
87	Hydraulic Pressure Gage Light - Change of
89	Engine Compartment Sealant - Change of
93	Engine Ice Detector Installation - Change From Hairpin to Probe Type
95	Temperature Sensing Bulb - Change of
98	Anti-"G" Suit Valve-Change of
103	Compressor Bleed Governor Seal Drain - Inst'l of
104	Exhaust Nozzle Control Seal Drain - Inst'l. of
105	Combustion Chamber Fuel Drain Line - Inst'l of
106	High Pressure Bleed Duct-Revision of
131	Engine Pump Low Pressure Warning Switch - Relocation of
151	Miscellaneous Specification Deviation and Corrections

2. Instrumentation as outlined in Convair Instrumentation Report No. ZC-8-059 dated 15 June 1954 with wiring addendum dated 15 June 1954.

3. List of required flight tests, revised 2 August 1954, that have not been accomplished on any airplane as of 4 August 1954.

4. List of parts or equipment, or both, temporarily installed or parts for which installation is postponed as of 4 August 1954.

5. Engineering data listed in exhibit of the contract which were required to be submitted prior to 4 August 1954 but which had not been submitted as of that date, are as follows (paragraph numbers refer to those of the Contract Exhibit):

Exhibit B, Part I

(A) 6
(B) 14
(C)1(a)
(C)1(c)
(C)3(c)
(C)1(d)
(C)2
(C)4(b)
(C)7

Exhibit B, Part II

(C) Flight Testing
ZU-8-013

6. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-090 dated 19 February 1954, revised 10 June 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 4 August 1954.

7. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, revised 25 May 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 4 August 1954.

8. List of castings, revised 29 June 1954, listing castings used on this airplane, certain of which have approved standards and certain of which do not have approved standards as of 4 August 1954.

9. Shortages as listed in Air Force Form 263C, Part II.

10. List of unaccomplished Air Force Inspection Discrepancies revised 4 August 1954.

11. List of incompleted manufacturing functions (for example, installations or operations due to shortages) as of 4 August 1954.

12. List of Materials, revised 17 May 1954, listing materials used on this airplane which were not approved as of 4 August 1954.

CONSOLIDATED VULTEE

DIVISION San Diego
MODEL YF-102

REPORT ZD-8-015
DATE 31 Aug 1954
Revised 5 Oct. 1954

TITLE
REPORT NO. ZD-8-015
LIST OF WAIVERS
FROM CONTRACTUAL REQUIREMENTS
FOR
YF-102 AIRPLANE AF S/N 53-1786
CONTRACT AF33(600)-5942

PREPARED BY ______________

____

CHECKED BY ______________

GROUP Project Specifications

REFERENCE ______________

APPROVED BY ______________

NO. OF PAGES 2
NO. OF DIAGRAMS ______

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

GO 241A

The following items are waivers from contractual requirements for Model YF-102 airplane, AF Serial No. 53-1786.

1. Engineering changes which have been incorporated in this Airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 5 October 1954, are as follows:

ECP No. (CAC-F102-)	Title
58	263 Equipment - Addition of
87	Hydraulic Pressure Gage Light - Change of
89	Engine Compartment Sealant-Change of
93	Engine Ice Detector Installation-Change From Hairpin to Probe Type
95	Temperature Sensing Bulb-Change of
96	Deletion of Residual Heat Doors
133	Windshield Anti-Icing Sys. Rev. To
151	Miscellaneous Specification Deviation and Corrections
176	GFAE Cor. of Misc. Aerno No's.

2. Instrumentation as outlined in Convair Instrumentation Report No. ZC-8-060 dated 15 July 1954, with wiring addendum dated 15 July 1954.

3. List of required flight tests, Report No. ZC-8-117, revised 5 October 1954, that have not been accomplished on any airplane as of 5 October 1954.

4. Report No. ZM-8-112 dated 5 October 1954, list of parts or equipment, or both, temporarily installed or parts for which installation is postponed as of 5 October 1954.

5. Engineering data listed in exhibit of the contract which were required to be submitted prior to 5 October 1954 but which had not been submitted as of that date, are as follows (paragraph numbers refer to those of the Contract Exhibit):

Exhibit B, Part I

(A) 3 - Control System Test Stand
(A) 6 - Feel System Bob Weight
(A) 8 - Dynamic Stability and Loop Study
(B) 14- Supersonic Jet Exit
(C)1(a)-Control System Test Stand
(C)1(b)-Control System Test Stand
(C)1(c)-Control System Test Stand
(C)1(d)-Control System Test Stand
(C)2 - Electronics Development
(C)4(b)-Wing Skin Wrinkling
(C)4(e)-Structural Tests-Dive Brakes, Armament Doors, Elevons and Rudder

Exhibit B, Part II

(C) Flight Testing ZU-8-013

6. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-090 dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 5 October 1954.

7. Equipment listed in Industry Developed Equipment Status Report Report No. ZM-8-091, dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 5 October 1954.

8. List of castings, Report No. ZM-8-113 revised 5 October 1954 listing castings used on this airplane, certain of which have approved standards and certain of which do not have approved standards as of 5 October 1954.

9. Shortages as listed in Air Force Form 263C, Part II.

10. Report No. ZM-8-114 dated 5 October 1954, List of unaccomplished Air Force Inspection Discrepancies as of 5 October 1954.

11. Report No. ZM-8-115 dated 5 October 1954, List of incompleted manufacturing functions (for example, installations or operations due to shortages) as of 5 October 1954.

12. List of Materials, Report No. ZM-8-116 revised 17 May 1954, listing materials used on this airplane which were not approved as of 5 October 1954.

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-016
DATE 15 Nov. 1954
MODEL YF-102A

TITLE

REPORT NO. ZD-8-016
LIST OF WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR YF-102A AIRPLANE AF S/N 53-1787
CONTRACT AF33(600)-5942

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
A	11-12-56	DDF	Revised and Rewritten	All
B	11-28-56	DDF	Revised to reference Form DD-250 and 781 in place of AF Form 263	All
C	12-11-56	DDF	Revise to reference AF Form 263 in place of Form DD-250 per request of Contracts Dept.	All

FORM 1812A-4

The following items are waivers from contractual requirements for Model YF-102 airplane, AF Serial No. 53-1787.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 12 November 1956, are as follows:

None

2. Engineering data listed in exhibit of the contract which were required to be submitted prior to 12 November 1956 but which had not been submitted as of that date, are as follows:

None

3. Part A The following are shortages at time of factory completion. It is anticipated that these items will be reflected in the Air Force Form 263c, Part II, consisting of 79 pages and dated 11 December 1956.

3. Part B Flight Limitations as listed in Department of Defense DD 781, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment of the intended usage. Reference T.O. 1F-102(Y)(11)-1 dated 31 August 1956.

3. Part C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263c, Part II, consisting of 79 pages and dated 11 December 1956.

CONSOLIDATED VULTEE

DIVISION San Diego

MODEL YF-102A

REPORT ZD-8-016

DATE 15 Nov. 1954

Revised 31 Dec. 1954

TITLE

REPORT NO. ZD-8-016

LIST OF WAIVERS

FROM CONTRACTUAL REQUIREMENTS

FOR

YF-102A AIRPLANE AF S/N 53-1787

CONTRACT AF33(600)-5942

PREPARED BY

GROUP Project Specificatio

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

GO 241A

The following items are waivers from contractual requirements for Model YF-102A airplane, AF Serial No. 53-1787.

1. Engineering changes which have been incorporated in this Airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 31 December 1954, are as follows:

ECP No. (CAC-F102-)	Title
71	Flight Report Holder, Map & Data Case - Relocation of
87	Hydraulic Pressure Gage Light - Change of
88	Landing Light Switch - Relocation of
89	Engine Compartment Sealant - Change of
90	Thermal & Accoustical Installation - Deviation
92	Pilot Ejection Seat - Changes To
93	Engine Ice Detector Inst. - Change from Hairpin to Probe Type
94	Water Tank Deletion
95	Temperature Sensing Bulb - Change of
134	External Power Receptacles - Change of
135	Terminals and Conduits - Change of
151	Miscellaneous Specification Deviation and Corrections
176	GFAE Cor. of Misc. Aerno No's
187	Seat Back Wedge - Addition of

2. Instrumentation as outlined in Convair Instrumentation Report No. ZC-8-061 dated 1 September 1954, with wiring addendum dated 1 September 1954.

3. List of required flight tests, Report No. ZC-8-117, revised 5 October 1954, that have not been accomplished on any airplane as of 31 December 1954.

4. Report No. ZM-8-112 dated 12 November 1954, list of parts or equipment, or both, temporarily installed or parts for which installation is postponed as of 31 December 1954.

5. Engineering data listed in exhibit of the contract which were required to be submitted prior to 31 December 1954 but which had not been submitted as of that date, are as follows (paragraph numbers refer to those of the Contract Exhibit):

Exhibit B, Part I

(A) 6 - Feel System Bob Weight
(C)1(d)-Control System Test Stand
(C)2 - Electronics Development
(C)4(b)-Wing Skin Wrinkling
(C)4(e)-Structural Tests - Dive Brakes, Armament Doors, Elevons and Rudder

Exhibit B, Part II

(C) Flight Testing ZU-8-013

6. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-090 dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 31 December 1954.

7. Equipment listed in Industry Developed Equipment Status Report Report No. ZM-8-091, dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 31 December 1954.

8. List of castings, Report No. ZM-8-113 revised 12 November 1954 listing castings used on this airplane, certain of which have approved standards and certain of which do not have approved standards as of 31 December 1954.

9. Shortages as listed in Air Force Form 263C, Part II.

10. Report No. ZM-8-114 dated 12 November 1954,
List of unaccomplished Air Force Inspection Discrepancies as of 31 December 1954.

11. Report No. ZM-8-115 dated 12 November 1954,
List of incompleted manufacturing functions (for example, installations or operations due to shortages) as of 31 December 1954.

12. List of Materials, Report No. ZM-8-116 revised 17 May 1954, Listing materials used on this airplane which were not approved as of 31 December 1954.

CONSOLIDATED VULTEE

DIVISION San Diego

MODEL YF-102A

REPORT ZD-8-016

DATE 15 Nov. 1954

TITLE

REPORT NO. ZD-8-016

LIST OF WAIVERS

FROM CONTRACTUAL REQUIREMENTS

FOR

YF-102A AIRPLANE AF S/N 53-1787

CONTRACT AF33(600)-5942

PREPARED BY ____________

GROUP Project Specification

REFERENCE ____________

CHECKED BY ____________

APPROVED BY ____________

NO. OF PAGES ________

NO. OF DIAGRAMS ________

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

The following items are waivers from contractual requirements for Model YF-102A airplane, AF Serial No. 53-1787.

1. Engineering changes which have been incorporated in this Airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 10 November 1954, are as follows:

ECP No. (CAC-F102-)	Title
58	263 Equipment - Addition of
87	Hydraulic Pressure Gage Light - Change of
88	Landing Light Switch - Relocation of
89	Engine Compartment Sealant - Change of
90	Thermal & Accoustical Installation - Deviation
95	Temperature Sensing Bulb - Change of
134	External Power Receptacles - Change of
151	Miscellaneous Specification Deviation and Corrections
176	GFAE Cor. of Misc. Aerno No's

2. Instrumentation as outlined in Convair Instrumentation Report No. ZC-8-061 dated 1 September 1954, with wiring addendum dated 1 September 1954.

3. List of required flight tests, Report No. ZC-8-117, revised 5 October 1954, that have not been accomplished on any airplane as of 10 November 1954.

4. Report No. ZM-8-112 dated 12 November 1954, list of parts or equipment, or both, temporarily installed or parts for which installation is postponed as of 12 November 1954.

5. Engineering data listed in exhibit of the contract which were required to be submitted prior to 10 November 1954 but which had not been submitted as of that date, are as follows (paragraph numbers refer to those of the Contract Exhibit):

Exhibit B, Part I

(A) 6 - Feel System Bob Weight
(C)1(d)-Control System Test Stand
(C)2 - Electronics Development
(C)4(b)-Wing Skin Wrinkling
(C)4(e)-Structural Tests-Dive Brakes, Armament Doors, Elevons and Rudder

Exhibit B, Part II

(C) Flight Testing ZU-8-013

6. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-090 dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 10 November 1954.

7. Equipment listed in Industry Developed Equipment Status Report Report No. ZM-8-091, dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 10 November 1954.

8. List of castings, Report No. ZM-8-113 revised 12 November 1954 listing castings used on this airplane, certain of which have approved standards and certain of which do not have approved standards as of 12 November 1954.

9. Shortages as listed in Air Force Form 263C, Part II.

10. Report No. ZM-8-114 dated 12 November 1954, List of unaccomplished Air Force Inspection Discrepancies as of 12 November 1954.

11. Report No. ZM-8-115 dated 12 November 1954, List of incompleted manufacturing functions (for example, installations or operations due to shortages) as of 12 November 1954.

12. List of Materials, Report No. ZM-8-116 revised 17 May 1954, Listing materials used on this airplane which were not approved as of 10 November 1954.

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-023
DATE 31 Aug 1955
MODEL F-102A

TITLE

REPORT NO. ZD-8-023

DOCUMENTATION FOR WAIVERS
FROM CONTRACTUAL REQUIREMENTS
FOR ACCEPTANCE OF
F-102A AIRPLANE AF S/N 53-1794
CONTRACT AF33(600)-5942

PREPARED BY R. J. Moore

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES 1

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
A	1-24-58	WWF	Revised to reflect configuration	All
			at time of final acceptance	
B	2-12-59	RJM	Revised to reflect configuration	
			at time of final acceptance	All

FORM 1812A-4

1. Engineering data listed in exhibit of Contract AF33(600)-5942 which were required to be submitted prior to 12 February 1959 but which have not been submitted as of that date, are as follows:

   None

2. The configuration of the aircraft is as called out in Model Specification ZD-8-003 as modified by Work Statement ZU-8-507 dated 20 June 1958. Certain work tasks have not been accomplished and these items will be reflected in Form DD-250 consisting of 47 pages dated 6 February 1959.

3. Certain items of DD-263 equipment are short. These are:

Part No.	Description	Quantity
8-92665-1	Enclosure, Canopy Blind Flying	1
8-92665-2	Enclosure, Canopy Blind Flying	1
8-92695	Enclosure, Assembly Windshield	1
8-92661	Container Assembly Blind Flying	1

These items will not be required for the Flight Test Program for which this aircraft is scheduled. These shortages will be reflected in Form DD-780-2 consisting of 1 page.

4. Flight limitations for the aircraft in its present configuration are contained in Convair Report No. 303-2-5705 dated 15 November 1958.

5. Convair Report No. ZC-8-658-1 dated 13 September 1958 contains Convair's recommendations as to accomplishment of routine action Time Compliance Technical Orders.

C O N V A I R

A DIVISION OF GENERAL DYNAMICS CORPORATION

SAN DIEGO

REPORT ZD-8-024

DATE 31 Dec 1955

MODEL F-102A

TITLE

REPORT NO. ZD-8-024
DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANE AF S/N 53-1796

CONTRACT AF33(600)-5942

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES 7

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
A	12-27-55	WMG	Corrections & Changes	1 & 6a

FORM 1818A-4

This report is prepared to define the condition of the aircraft as of factory completion for final acceptance by the Air Forces.

PART A:

The following items are deviations from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1796.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposal have been submitted to AMC but which have not been approved as of 8 December 1955, are as follows:

ECP NO. (CAC-F102-)	Title
233R1	Finish Requirements - Change of
1020	Landing Gear Warning System - Positive - Warning
1022	Elevator - Change from 10° to 8° Down Surface Travel
1024	Cockpit Ground Air Conditioning - Change of
1031	Pratt & Whitney P-23 Engine Changes - Group II
1065	Oxygen Cylinder Bottle - Addition of
1068	Pratt & Whitney P-23 Engine Changes - Group III
1087	Constant Speed Drive Oil System - Revision of

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 9 December 1955 but which have not been submitted as of that date are as follows (Paragraph numbers refer to those of Exhibits and Tables of the Contract:)

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	3-15-56
ZS-8-058	Control System Analysis	1-2-56

EXHIBIT "A": Paragraph (g)
Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbook to be replaced with regular Flight Handbook in March 1956.

3. Equipment listed in the "Equipment Approval Status Record" Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplance, certain of which have been approved and certain of which have not been approved as of 15 Nov. 1955.

4. PART A The following are shortages at time of factory completion. It is anticipated that these items will be reflected in the Air Force form 263 Part II.
(EPD) Expected Part Delivery Date

Quantity	Description	Part No.
1	Cooler Engine Instl. 8-22519 (GFAE Part No. 660599) (EPD) To Be Determined by Vendor	8-22957-7
1	Duct Pilots PNL Instl. 8-38020 (EPD 12-12-55)	L1 304
2	Trim & Feel Installation Instl. 8-49346 (EPD 12-16-55)	8-47385
1	Ped. Throttle Cont Instl. 8-49782 (EPD 12-15-55)	CONT 187-1
	Wire Elect. Instl. Instl. 8-64812 (EPD 12-15-55)	Wire
1	Harn Elect. Instl. Instl. 8-67802 (EPD 12-15-55)	REL 216-1
1	Trans Winds A-1 Instl. 8-68210 (EPD 12-15-55)	8-68379
1	Fin Tip Assy Instl. ACA 8-13563 Intfrim Tip Instld. (EPD 12-15-55)	8-14520-1
1	Elevator Trim Instl. 8-68190 (EPD 2-1-56)	UNHO-1
1	Polentiometer Installation Instl. 8-49876 (EPD 2-1-56)	UN 110-2

4. PART A (Cont.)

Quantity	Description	Part No.
1 Ea	Armament Control Syst. Instl. ACA 8-15549 & 8-13563 (EPD 12-30-55)	L1 320 Box 166-2
1	Take-Off Trim System Instl. ACA 8-500 Interim Substitute Installed (EPD 12-16-55)	UN 110-5
2	Windshield Anti-Ice Curcuit Instl. ACA 8-653 & 8-15496 (Vendor To Furnish EPD)	TRA 294
1	Trans. - Elev. Trim Instl. 8-49393 (EPD 12-12-55)	UN 110-3
8	Wing Spar Fuselage Attach Bolts Instl. 8-10030, Sht 1, Chg H (EPD Pending A.F. Approval)	MS 20010-34

4. PART B

Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or the intended usage.

Description: Pilot Assist - Operation of

Part No:
1. Suitable Pitch "G" Limiter
2. Suitable Roll Coupling Limiter (Ref. ACA 8-754 and 8-884)

Quantity: One each

Limitation: Item 2 must be flight tested prior to activation of pilot assist. Until Item 1 is installed, pilot assist will be operated only with the following elevator limit switch settings: ± 2.3° above 15,000 feet or below $M=0.6$; $\pm 1.0°$ above $M=0.6$ at altitudes below 15,000 feet.

Description: Pitch and Yaw Damper Operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a pitch "G" Limiter, pitch damper system shall not be used below 15,000 feet altitude.

Description: Fuel Flow Joiner (Ref. ACA 8-708)

Part No: CVAC REG 150-3 (EPD 3-2-56)

4. PART B (Cont.)

Quantity: One

Remarks: Provides fuel flow joiner in tank to engine fuel system to equalize the flow quantity-wise. This insures equal depletion from both sides and eliminates present necessity of pilot to maintain lateral balance with boost pump switch control.

Limitation: Until accomplished, pilot must monitor fuel quantity to maintain equal distribution.

Description: Constant Speed Drive-Oil System for (Ref. ECP 1087)

Part No: (CVAC FI 23-5 and GFAE P/N 660599)

Quantity: One Ea

Limitation: Until ECP 1087 is accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of AC power may occur.

Description: Fin Tip (Ref. Dwg. 8-14520 and ACA 8-13563)

Part No: 8-14520-1

Quantity: One

Remarks: Installed interim Fin Tip (Any tip prior to vendor Serial Number 20)

Limitation: Until 8-14520 Fin Tip (Vendor Serial No. 20 and on) is installed, this airplane is limited to a "G" loading of .80 design limit load.

Description: Armament Control System - Revision of (Ref. ACA 8-15549 and 8-14707)

Part No: CVAC LI 320, Box 166-2

Quantity: One each

Remarks: 1. LI 320 replaces mis-fire light with one that can be tested and dimmed.

4. PART B (Cont.)

Remarks: (Cont.)

2. Adds relay box, door switches and launcher switches; all of which are required for armament re-set system to prevent inadvertent and/or out of sequence door and launcher operation.

Limitation:

1. Missile mis-fire light cannot be tested or dimmed.

2. Armament system inoperable without Relay BOX 166-2 installed.

Note: Ground operation of the missile bay doors is provided by Instrumentation Control Circuit TVA #IN 18326 on Drawing 8-64295, IN 18325 on Drawing 8-64296, and IN 18324 on Drawing 8-60010.

Description: Take-off Trim Position (Ref. Differential Linkage Installation ACA 8-500)

Part No: CVAC UN 110-5

Quantity: One

Remarks: Interim substitution of elevator trim actuator ACTU 13-7 (Per TVA 41411 on Dwg. 8-49346) for UN 110-5 imposes the following limitation.

Limitation: Until such time that interim ACTU 13-7 is replaced byUN 110-5, pilot must trim elevator from stick button to some position above 5 degrees UP before take-off trim circuit will function as designed.

Note: Elevator will not trim to 5 degrees UP position on take-off trim circuit if starting position is less than 5 degrees up. Installation of UN 110-5 lifts the limitation.

Description: Windshield Anti-Ice Circuit - Add transformers, revise wire gauges and circuits, etc. to increase wattage on NESA glass. (Ref. ACA 8-653 and 8-15496).

Part No: CVAC TRA 294

Quantity: Two

4. PART B (Cont.)

Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the windshield free of ice.

Limitation: The airplane should not be flown in icing conditions until ACA 8-653 and 8-15496 have been incorporated. Also, de-fog may not be provided under extreme conditions.

The Following Limitations Are Due to Instrumentation Installation.

Description: TVA IN 29940 on 8-73000 deletes armament installation left hand forward and aft bays.

Remarks: Space required for instrumentation junction box, totalizer, and harness routing.

Limitations: Armament system inoperative.

Description: TVA IN 31840 on 8-36094 remover glide-slope antenna 37P-2.

Remarks: Interferes with installation of metal nose cone.

Limitations: System inoperative.

Description: TVA IN 33840 on 8-00043 deletes pitot-heater wiring.

Remarks: Pitot heater not required in the instrumentation nose boom.

Limitation: No pitot heater operation.

Description: TVA IN 18326 on 8-64295, IN 18325 on 8-64296, and IN 18324 on 8-60010 provide for installation of switch and wiring for operation of missile bay doors.

Remarks: This switch and circuitry is installed to operate the missile bay doors.

Limitations: Missile bay doors operable on ground only.

Description: TVA IN 40943 on 8-60644 deletes trigger switch wiring from the armament system.

Remarks: To provide instrumentation record switch installation.

Limitations: No firing of armament possible (See Item 1).

Description: TVA IN 40536 on 8-38019 and IN 40263 on 8-94701 delete instrument panel lights and associated equipment.

Remarks: Deletion necessary for instrumentation equipment installation.

Limitation: No instrument panel lighting, Airplane not to be scheduled for night flights until lights installed.

4. PART B (cont.)

Description: Wing Spar Fuselage Attach. Bolts.

Remarks: Temporary load factor limitations as a result of installation of P/N MS 20010-34 wing spar fuselage attach. bolts (wing spar No. 6) until optimum bolt is approved.

Limitation: The airplane is temporarily limited to the following:

Symmetrical Maneuvers

1. Normal load factor + 4.7g maximum

Asymmetrical Maneuvers

1. Normal load factor + 3.1g maximum
2. Roll rate limited to 100°/sec. for changes in angle of bank of 100°.
3. Aileron angle is restricted to ± 3.3° (1/2 throw) for all speeds above 420 knots calibrated airspeed for altitudes below 12,000 feet.

4. PART C Work tasks not accomplished on this airplane at time of final delivery shall be referenced in the Air Force Form 263C Part VI.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 31 December 1955.

6. List of items not proven to be interchangeable on this airplane at time of final acceptance on 22 December 1955:

Rudder Nose Door	8-15016-39 8-15016-41 8-15016-43
Wing Leading Edge Panel Assy	8-17230-27 8-17230-28 8-17230-29 8-17230-30 8-17230-31 8-17230-32 8-17230-33 8-17230-34 8-17230-35 8-17230-36
Wing Leading Edge Assy	8-17232-1
Wing Leading Edge Assy	8-17233-1 8-17233-2
Wing Leading Edge Assy	8-17234-1 8-17234-2
Wing Leading Edge Assy	8-17235-1 8-17235-2
Wing Leading Edge Assy	8-17236-1 8-17236-2
Wing Tip Assy	8-17900-9 8-17900-10
Nose Radome Assy	8-70410
ATM Access Door Assy	8-72601-19
Electronic Purge Valve	
Inspection Door	8-73433-79
Tailcone Assy	8-73490
Mid-Electronic Door Assy	8-73608-25
Speed Brake Door Assy	8-73614-1 8-73614-2

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-024
DATE 31 Aug 1955
MODEL F-102A

TITLE

REPORT NO. ZD-8-024
DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANE AF S/N 53-1796
CONTRACT AF33(600)-5942

PREPARED BY ____________________

GROUP Project Specifications

REFERENCE ____________________

CHECKED BY ____________________

APPROVED BY ____________________

NO. OF PAGES ____________

NO. OF DIAGRAMS ____________

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

FORM 1812 A-4

This report is prepared to define the condition of the aircraft as of final Air Force acceptance on 31 August 1955.

PART A

The following items are deviations from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1796.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 1 August 1955, are as follows:

ECP No. (CAC-F102-)	Title
233	Finish Requirements - Change of:
1069	Negative "G" Valve - Deletion of:

2. List of required flight tests, Report No. ZC-8-117, revised 30 August 1955, that have not been accomplished on any airplane as of 31 August 1955.

3. Engineering data listed in exhibit of the contract which were required to be submitted prior to 31 August 1955, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract exhibit):

Exhibit "A"

Para. (b) Stress Analysis
(c) Actual Weight and Balance Report
(g) (2) Handbook Flight Operating Instructions
(g) Illustrated Parts Breakdown
(g) Inspection Requirements

4. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-091 dated 19 February 1954, Revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 31 August 1955.

5. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, Revised 21 September 1954, which is installed in this airplane, certain of which have not been approved as of 31 August 1955.

6. PART A The following are initial shortages at time of factory completion.

NOTE: Items indented in each column are items not installed due to the noted shortages above them, these pieces are generally required to complete an installation or assembly.

Quantity	Description	Part No.
1	Antenna - Glide Slope	37P-2 or 37P-3
1	Curtain Assy. (Nose Wheel Well)	8-62272-1
1	Curtain Assy. (Nose Wheel Well)	8-62272
1	Curtain Assy. (Nose Wheel Well)	8-62272-3
1	Curtain Assy. (Nose Wheel Well)	8-62272-5
1	Panel Assy. - Armament Control	8-64328-819
1	Cap Assy. - Armament Control Panel (Red)	C222B-6EF
1	Antenna Data Link	Not Released
1	Gyro - Vertical	UN36-28
1	Cylinder Assy. - Rocket & Missile Launcher	1302900
1	Intervalometer - Missile	463054-113
1	Relay - Armament Control	8-06386
1	Intervalometer - Rocket	11093-MOD72
1	Cylinder Assy. - Rocket & Missile Launcher	1302800
1	Cylinder Assy. - Rocket & Missile Laundher	1302900
1	Arm Assy. - Rocket & Missile Launcher	8-54409-809
1	Cylinder Assy. - Rocket & Missile Launcher	1302900

6. PART A
(Cont)

Quantity	Description	Part No.
1	Cylinder Assy. - Rocket & Missile Launcher	1302800
1	Cylinder Assy. - Rocket & Missile Launcher	1302900
1	Arm Assy. - Rocket & Missile Launcher	8-54409-811
1	Pin Assy. N.L.G.. Steering	A-623717
1	Pitot Tube - Airspeed	AN5816-2
1	Radome - Nose	8-36069 (8-03333)
1	Antenna Assy. Vertical Fin Tip (UHF, Omn. Range & Air to Air IFF)	8-14520
1	Shield Assy. - Intake Duct	SE-0814-1
1	Cover Assy. - Cockpit & Radome	SE-0803
1	Shield Assy. - Exhaust Tail Pipe	SE-0827
1	Enclosure Assy. - Blind Flying	8-92659
1	Duct Inst. - Anti-Ice	VA707-1
4	Cable & Linkage Inst.	SEAL-175
1	Tip Inst. - Fin	8-14520-1
1	Radome Nose Inst.	8-70410-801
1	Radome Nose Inst.	8-73701-11
1	Radome Nose Inst.	8-73701-12
1	Radome Nose Inst.	8-73701-14
1	Contr. Inst. Elev. Trim Servo	UN110-1

6. PART A
(Cont)

GOVERNMENT FURNISHED SHORTAGES AT TIME OF ACCEPTANCE FROM PRIME CONTRACTOR

Quantity	Description	Part No..
1	Indicator - Tachometer, Electric, 0-11070 RPM, Single (MS28000-1 or E-29)	MIL-I-5573A or 21302
1	Indicator - Course - (Type ID-351/ARN or ID-351A/ARN or ID-387/ARN)	MIL-I-8303 or MIL-I-9229
1	Indicator - Airspeed, Mach Number & Maximum Allowable Speed, Pitot Static, (Type ME-2)	MIL-I-8269
1	Handbook of Flight Operating Instructions	T.O. 1F-102A-1
1	Illustrated Parts Catalog	T.O. 1F-102A-4
1	Handbook of Inspection Requirements	T.O. 1F-102A-6
1	Handbook of Maintenance Instructions (Armament and Armament Electronics)	T.O. 1F-102A-2-12
1	Handbook of Maintenance Instructions (Wiring Data)	T.O. 1F-102A-2-13
1	Basic Weight Check List and Loading Data	T.O. 1F-102A-5
1	Launcher - Missile	463054-113
1	Launcher - Missile	463054-113

6. PART B Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpeted to mean the flight test assignment or the intended usage.

Description: ACA 8-653 - Windshield De-fog Circuit, Add transformers, change wire gauges, revise circuits, etc., to increase wattage on Nesa glass.
Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep windshield free of ice.
Limitation: The airplane should not be flown in icing conditions until ACA 8-653 has been incorporated. Also de-fog may not be provided under extreme conditions.

Description: ACA 8-638 Windshield Overheat Warning Circuit Addition of
Part No.: UN 108, THER 19
Quantity: One each
Remarks: This ACA provides for illumination of placard on caution panel if windshield vinyl overheats. Overheating will cause bubbles in windshield and necessitate replacement.
Limitation: Windshield rain clearing shall not be used on a dry windshield and for not more than 1-1/2 min. when wet.

Description: ACA 8-649 - Elevon Actuator Rod End Attachment - Revision to
Remarks: This ACA increases length of bushings and chrome plates the attaching bolt to prevent galling action between the elevon actuator rod end bearing inner race and the attaching bolt.
Limitation: Elevon actuator bearings should be lubricated after every 5 flight hours and rod end bearings inspected after every 10 hours of flight.

Description: Pilot Assist (Ref. ACA 8-724 & ACA 8-523)
Part No: UN 100, UN 36-28, POTE 103-1
Quantity: One each UN 100 & UN 36-28 and 2 POTE 103-1
Remarks: Pilot assist system shall not be used unless above items are installed. (Un 100 installed by original design release)

6. PART B (Cont)

Description: Change material of skin. Fuselage Sta. 443.3 to 481.7 Upper side. ACA 8-12881.

Remarks: Without this change incorporated, the airplane shall be limited to the following:

1. Aileron Deflections:
   - (A) Aileron Angle = 7.2° Max. above 12,000 feet.
   - (B) Aileron Angle = 5.0° Max. below 12,000 feet and above 480 knots Calibrated.
2. Maximum roll rate of 100°/second for not more than 90° bank.
3. 4g Maximum symmetrical load factor for roll maneuvers.

Description: Anti-Icing - Engine Duct Lips (Ref. ACA 8-13569)
Part No.: VA 707-1
Quantity: One
Remarks: Valve is replaced by solid plug in duct valve making anti-icing of engine duct lips inoperable.
Limitation: All-weather operations should not be planned until valve VA 707-1 is installed.

Description: Rain Clearing System (Ref. ACA 8-13469)
Part No.: VA 931-1 Valve
Quantity: One
Remarks: Valve is replaced by solid plug in duct valve, making rain clearing system inoperative..
Limitation: All-weather operations should not be planned until valve VA 707-1 is installed.

Description: ACA 8-13699 Drag Parachute Ripcord Cable Release.
Part No.: 8-44460-7 Guide
Quantity: One Each
Remarks: The guide has been changed to provide closer fit and greater length of plunger (8-44439) engagement.
Limitation: Inspect before each flight that plunger, 8-44439 and guide 8-44460 are in line.

6. PART B (Cont)

Description: Trim Servo & Speed Brake (Ref. ACA 8-740)
Part No.: UN 110-1, UN 110-2, UN 110-3, UN 110-5
Quantity: One each
Remarks: There will be no automatic elevator deflection to compensate for pitching effect from speed brake extension and no automatic trim for unstable stick forces until above units are installed.

Description: Missile Intervalometer Install. (Ref. ECP1034)
Part No.: UN 120 Intervalometer
Quantity: One
Remarks: Must be installed prior to firing more than one missile at a time.

Description: Rocket Intervalometer Install. (Ref. TVA #42000)
Part No.: UN 66-2 Intervalometer
Quantity: One
Remarks: Substitution of UN 66-1 for UN 66-2 is acceptable for firing except CVAC UN 66-1 is not designed for 14 volt operation. Do not attempt to operate armament system on emergency D.C. power.

Description: Pitch Damper System ACA 8-10851 (Amend)
Part No.: UN 100
Quantity: One each
Remarks: Pitch damper system shall not be used below
15
15,000 ft. until UN 100 is installed.

Description: Constant Speed Drive - Oil System for
Part No.: 8-20503
Quantity: One
Remarks: Zero or negative "G" maneuvers shall be limited ot three (3) seconds. Until a satisfactory oil system is designed, maneuvers in excess of that mentioned above will not supply oil to the unit during zero or negative "G" conditions. During this maneuver, lack of A.C. power may occur.

6. PART B (Cont)

Description: ACA 8-531, 8-13449 Hydraulic relief valve - Addition for thermal venting.
Part No.: VA 981-1 (Valve)
Quantity: Two each
Remarks: In case of pumps flow control malfunctioning the hydraulic oil may heat up by working against the relief valve pressure. With this valve (VA 981-1) the relief valve will open at a predetermined oil temperature to protect the system.
Limitation: Land the aircraft as soon as possible if primary or secondary system oil pressure indicator consistently shows pressures above 3500 psi..

Description: ACA 8-716 Relief Valve installation mid-electronics compartment.
Quantity: One each
Part No.: 8-89148 (Valve Only)
Remarks: This relief valve is installed to control internal fuselage pressure in the nose wheel and forward electronics compartment area.
Limitation:
(1) This change must be incorporated before missile and/or rocket firing.
(2) Do not operate aircraft above 5000 feet with electronic equipment installed.

The following limitations though not due to parts shortage, should also be noted.

Description: Mil-Electronics Door (Data link antenna Installation)
Remarks: A satisfactory UHF Data Link Antenna has not been developed for incorporation in the mid-electronics door. A similar door deleting the antenna installation has been installed. No limitations are imposed on the aircraft until the MG 10 - Data Link installations are made.

Description: Missile Launching System
Remarks: Launcher extension and retraction times are in excess of that required by Model Specification. A fast action system is being developed to be compatible with specification requirements but is not available for incorporation in this airplane. The only limitations or restrictions imposed with this slower system is the reduction in kill probability due to having to stay on target longer periods of time to fire an equivalent number of missiles.

6. PART B
(Cont)

Description:	Vertical Fin Tip
Part No.:	8-14520
Quantity:	One
Remarks:	Due to a vendor shortage, the required fin tip could not be installed. The limitations are concerned with the antenna response which is below standard for a tactical airplane. The substituted YF-102 fin tip does not meet the configuration standards of the F-102A but is a suitable substitute until the shortage fin tip is installed.

7. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 31 August 1955.

C O N V A I R
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-025
DATE 31 July 1955
MODEL F-102A

TITLE

REPORT NO. ZD-8-025
DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANE AF S/N 53-1795
CONTRACT AF33(600)-5942

PREPARED BY ____________

GROUP Project Specifications

REFERENCE ____________

CHECKED BY ____________

APPROVED BY ____________

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REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

FORM 1812A-4

This report is prepared to define the condition of the aircraft as of final Air Force acceptance on 31 July 1955. This report supersedes the preliminary Report No. ZD-8-025 dated 31 July 1955 submitted by TWX.

PART A

The following items are deviations from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1795.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 31 July 1955, are as follows:

ECP No. (CAC-F102-)	Title
233	Finish Requirements - Change of:
1069	Negative "G" Valve - Deletion of:

2. List of required flight tests, Report No. ZC-8-117, revised 4 February 1955, that have not been accomplished on any airplane as of 31 July 1955.

3. Engineering data listed in exhibit of the contract which were required to be submitted prior to 31 July 1955, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract exhibit):

Exhibit "A"

Para. (b) Stress Analysis
(c) Actual Weight and Balance Report
(g) (2) Handbook Flight Operating Instructions
(g) Illustrated Parts Breakdown
(g) Inspection Requirements

4. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-091 dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 31 July 1955.

5. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have not been approved as of 31 July 1955.

6. Shortages as listed in Air Force form 263C, PART II which do not affect the performance or mission of the airplane as defined for its intended usage, however these shortages do prevent the airplane from meeting the airplane specification requirements for a tactical airplane.

NOTE: Items indented in each column are items not installed due to the noted shortage above them, these pieces are generally required to complete an installation or assembly.

QUANTITY	DESCRIPTION	PART NO.
1	Loose Equipment MG-3	PLU215-24-28PX
1	Loose Equipment MG-3	PLU215-22-14P
1	Housing Installation Brake Chute	8-44471-23
1	Housing Installation Brake Chute	8-44471-25
1	Housing Installation Brake Chute	AN-393-19
1	Housing Installation Brake Chute	AN-380-2-2
1	Installation - Harness -Electric	CVAC BOX 114-2
1	Tip Installation - Wing R/H	8-17901-802
1	Tip Installation - Wing L/H	8-17901-801
1	Tip Installation - Wing R/H	8-17901-6
1	Tip Installation - Wing L/H	8-17901-5
1	Tube Installation - Hinge Box	CVAC VA343-3
1	Tube Installation - Center Missile Bay	8-80409-779
1	Tube Installation - Center Missile Bay	8-80409-781
2	Tube Installation - Center Missile Bay	MS21919DG-4
2	Tube Installation - Center Missile Bay	NAS43DD3-24

6. (Cont)

QUANTITY		DESCRIPTION	PART NO.
1		Speed Brake - Mach. Inst.	CVAC CY221-2
1		Speed Brake - Mach. Inst.	CVAC CY221-3
1		Speed Brake - Mach. Inst.	CVAC CY222-2
1		Speed Brake - Mach. Inst.	CVAC CY222-3
1		Tip Installation Fin	8-14520
2		Hydraulic Res. Installation Primary & Secondary	REG 64-2
4		Cable & Linkage Inst.	SEAL 175
1		Act. Instl. Aft Barrel	CVAC POTE 103-1
1		Act. Instl. Aft Barrel	CVAC POTE 103-1
1		Valve Installation	VA 981-17
	1	Tube Installation	8-80409-785
	1	Tube Installation	8-80409-787
	1	Nut Plate	8-85201-12
	2	Union	AN 815-4D
	1	Clamp	MS 21919DG-13
	2	"O" Ring	AN6290-4
1		Valve Installation	VA 891-17
	1	Tube Installation	8-80409-793
	1	Tube Installation	8-80409-795
	1	Nut Plate	8-85201-12
	1	Clamp	MS 21919DG13
	2	Union	AN 815-4D
	2	"O" Ring	AN 6290-4
	1	Bracket	Q 918-7

6. (Cont)

QUANTITY		DESCRIPTION	PART NO.
1		Valve Installation	VA 891-17
	1	Tube Installation	8-80409-789
	1	Tube Installation	8-80409-791
	2	Union	AN 815-4D
	1	Bracket	Q 918-7
	2	"O" Ring	AN 6290-4
	1	Nut Plate	8-85201-12
2		Elevon	8-16757-7
2		Actuator	8-80203-9
2		Actuator	8-80203-7
4		Trailing Edge	8-16757-7
2		Actuator	8-80203-7
1		Door	8-68195-7
1			8-68195-9
1		Equipment Installation Refrigeration Access Door	FI 207
	4	Screw	AN365-832
	4	Nut	AN515-9R6
2		Receptacle - Change Wiring to	8-68227-7
2		Seal	8-68290
	2	Retainer	8-68291-7
	2	Retainer	8-68291-9
	12	Bolt	MS20004-14

6. (Cont)

QUANTITY	DESCRIPTION	PART NO.
1	Skin	8-73434-67
1	Doubler	8-73434-65
6	Nut Plate	NU 414-2
1	Skin	8-73434-68
1	Doubler	8-73434-66
6	Nut Plate	NU 414-2
1	Valve Assembly Installation	8-89148
1	Gasket	8-89227
1	Filler	8-89228
6	Screw	AN501 C-10-10
6	Washer	Q 8-Cn256-2
6	Nut Plate	AN366 F1032
	MLG Door - Down Relay Switch - Revise Wiring to:	
1 ea.	Transformer Installation	UN 110-1, 2, 3, 4
1	Shelf Assembly	8-49393-27
1	Support	8-49393-23
1	Support	8-49393-25
1	Intercostal	8-49393-21
1	Ram Air Turbine - Installation	
1	Belt Frame	* 8-73292-900
1	Belt Frame	* 8-73294-900
1	Panel	* 8-73439-905

* Installation No.

6. (Cont)

QUANTITY		DESCRIPTION	PART NO.
1		Oil Filter for Constant Speed Drive	FI-212
	2		AN 365-428
	2		AN 960 C416
	2		AN 4 - 16A
	2		AN 960 C 616
	1	Switch	8-27953-13
1		Harnesses for MG-3 Free Air Temp. Bulb Installation	8-36863
	1		8-36883-803
	1		8-61938-803
	1		8-68538-801
	1		8-36897-803
3		Missile Launcher Control Valves	VA 674-9
1		Bulkhead Revision - Change Nuts, Bolts and Fittings for Radome Installation	8-71615-5 8-71615-6
	1	Fittings	8-73701-15
	1	Fittings	8-73701-16
	1	Fittings	8-73701-17
	1	Fittings	8-73701-18
	4		AN 509-416R-22
1		Cover Plates for Holes in Missile Bay Due to Deletion Anti-Icing Plumbing	TVA 40171-7
	1	Cover	8-17976-7
	1	Cover	8-17976-9

6. (Cont)

QUANTITY		DESCRIPTION	PART NO.
	1	Channel	8-17976-11
	1	Screen	AN366F1032
	1	Rivet	AN520-10R20
	1	Rivet	Riv 183-14
1		Refrigerator Unit Support	8-87269-9
1		Housing - Drag Chute Guide Instl.	8-44460-7
1		Beam	TVA-38430-9
1		Rib - Cover Plates for Holes in Missile Bay Due to Deletion Anti-Icing Plumbing	TVA-40171-7G
	1	Cover	8-17976-7
	1	Cover	8-17976-9
	1	Channel	8-17976-11
	1	Screw	AN 3661032
	1	Rivet	AN 520-10R20
	1	Rivet	Riv 183-14 G
1		Vertical din tip installation	8-14520-1
1		Curtain Assembly (Nose Wheel Well)	8-62272
	1	Curtain	8-62272-1
	1	Curtain	8-62272-3
	1	Curtain	8-62272-5

6. (Cont)

QUANTITY	DESCRIPTION	PART NO.
1	Container Assembly - Blind Flying Panels	8-92661
1	Shield Assembly - Exhaust Tail Pipe	SE-0827
1	Shield Assembly - Intake Duct	SE-0814-2
1	Cover Assembly - Canopy and Radome	SE-0803
4	Lock Assembly - Lower Missile Bay Doors	SE-0808-804
4	Cylinder Assembly - Rocket & Missile	1302900
2	Cylinder Assembly - Rocket & Missile	1302800
1	Sensor Inst. - Cabin Press.	REFR 4-9
1	Canopy Jettison System Emerg.	8-94101-900
1	Canopy Jettison System Emerg.	MS21919DG-8
A/R	Canopy Jettison System Emerg.	CVAC TAP 9-4
2	Canopy Jettison System Emerg.	AN 743-12
1	Canopy Jettison System Emerg.	NAS43DD3-12
2	Canopy Jettison System Emerg.	NAS43DD3-24
2	Canopy Jettison System Emerg.	NAS43DD3-44
1	Canopy Jettison System Emerg.	AN 815-4
1	Canopy Jettison System Emerg.	AN 6290-4
2	Canopy Jettison System Emerg.	AN 520-10R-1B
1	Canopy Jettison System Emerg.	NAS43HT4-26
1	Canopy Jettison System Emerg.	MS28741-4-0230

6. (Cont) (Government Furnished Equipment)

QUANTITY	DESCRIPTION	PART NO.
1	Hand Book of Flight Operating Instructions	T.O. 1F-102A-1
1	Illustrated Parts Catalog	T.O. 1F-102A-4
1	Handbook of Maintenance Instructions (Power Plant)	T.O. 1F-102A-2-4
1	Handbook of Maintenance Instructions (Armament and Armament Electronics)	T.O. 1F-102A-2-12
1	Basic Weight Check List and Loading Data	T.O. 1F-102A-5
6	Launcher - Missile	463054-113

6. (a) Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpeted to mean the flight test assignment or the intended usage.

Description: ACA 8-653 - Windshield De-fog Circuit, Add transformers, change wire gauges, revise circuits, etc., to increase wattage on Nesa glass.
Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep windshield free of ice.
Limitation: The airplane should not be flown in icing conditions until ACA 8-653 has been incorporated. Also de-fog may not be provided under extreme conditions.

Description: ACA 8-638 Windshield Overheat Warning Circuit - Addition of
Part No: UN 108, THER 19
Quantity: One each
Remarks: This ACA provides for illumination of placard on caution panel if windshield vinyl overheats. Overheating will cause bubbles in windshield and necessitate replacement.
Limitation: Windshield rain clearing shall not be used on a dry windshield and for not more than 1-1/2 min. when wet.

Description: ACA 8-649 - Elevon Actuator Rod End Attachment - Revision to
Remarks: This ACA increases length of bushings and chrome plates the attaching bolt to prevent galling action between the elevon actuator rod end bearing inner race and the attaching bolt.
Limitation: Elevon actuator bearings should be lubricated after every 5 flight hours and rod end bearings inspected after every 10 hours of flight.

Description: Pilot Assist (Ref. ACA 8-724 & ACA 8-523)
Part No: UN 100, UN 36-28, POTE 103-1
Quantity: One each UN 100, & UN 36-28 and 2 POTE 103-1
Remarks: Pilot assist system shall not be used unless above items are installed. (UN 100 installed by original design release)

6. (a) Cont.

Description: Trim Servo & Speed Brake (Ref. ACA 8-740)
Part No: UN 110-1, UN 110-2, UN 110-3, UN 110-5
Quantity: One each
Remarks: There will be no automatic elevator deflection to compensate for pitching effect from speed brake extension and no automatic trim for unstable stick forces until above units are installed.

Description: Missile Intervalometer Install. (Ref. ECP 1034)
Part No: UN 120 Intervalometer
Quantity: One
Remarks: Must be installed prior to firing more than one missile at a time.

Description: Rocket Intervalometer Install. (Ref. TVA #42000)
Part No: UN 66-2 Intervalometer
Quantity: One
Remarks: Substitution of UN 66-1 for UN 66-2 is acceptable for firing except CVAC UN 66-1 is not designed for 14 volt operation. Do not attempt to operate armament system on emergency D.C. power.

Description: Pitch Damper System - ACA 8-10851 (Amend)
Part No: UN 100
Quantity: One each
Remarks: Pitch damper system shall not be used below 15,000 ft. until UN 100 is installed.

Description: Anti-Icing Duct Hole Provisions at B.L. 39.25, Sta. 295.00 in Rib (Ref. ACA 8-13442)
Remarks: ACA removes hole used for anti-icing duct.
Limitation: Must be accomplished before missile and/or rocket firing to prevent missile dust from entering L.E. thus causing corrosion.

Description: Constant Speed Drive - Oil System for
Part No: 8-20503
Quantity: One
Remarks: Zero or negative "G" maneuvers shall be limited to three (3) seconds. Until a satisfactory oil system is designed, maneuvers in excess of that mentioned above will not supply oil to the unit during zero or negative "G" conditions. During this maneuver, lack of A.C. power may occur.

6. (a) Cont.

Description: Change material of skin. Fuselage Sta. 443.3 to 481.7 Upper side. ACA 8-12881.

Remarks: Without this change incorporated, the airplane shall be limited to the following:

1. Aileron Deflections:
    - (A) Aileron Angle = 7.2° Max. above 12,000 feet.
    - (B) Aileron Angle = 5.0° Max. below 12,000 feet and above 480 knots calibrated.
2. Maximum roll rate of 100°/second for not more than 90° bank.
3. 4 g. Maximum symmetrical load factor for roll maneuvers.

Description: Anti-Icing - Engine Duct Lips (Ref. ACA 8-13569)
Part No: VA 707-1
Quantity: One
Remarks: Valve is replaced by solid plug in duct valve making anti-icing of engine duct lips inoperable.
Limitation: All-weather operations should not be planned until valve VA 707-1 is installed.

Description: Rain Clearing System (Ref. ACA 8-13469)
Part No: VA 931-1 Valve
Quantity: One
Remarks: Valve is replaced by solid plug in duct valve, making rain clearing system inoperative.

Description: ACA 8-13699 Drag Parachute Ripcord Cable Release.
Part No: 8-44460-7 Guide
Quantity: One each
Remarks: The guide has been changed to provide closer fit and greater length of plunger (8-44439) engagement.
Limitation: Inspect before each flight that plunger, 8-44439 and guide 8-44460 are in line.

6. (a) Cont.

Description:	ACA 8-531, 8-13449 Hydraulic relief valve - Addition for thermal venting.
Part No:	VA 981 -1 (Valve)
Quantity:	Two each
Remarks:	In case of pumps flow control malfunctioning the hydraulic oil may heat up by working against the relief valve pressure. With this valve (VA 981-1) the relief valve will open at a predetermined oil temperature to protect the system.
Limitation:	Land the aircraft as soon as possibly if primary or secondary system oil pressure indicator consistently shows pressures above 3500 psi.

Description:	ACA 8-716 Relief valve installation mid-electronics compartment.
Quantity:	One each
Part No:	8-89148 (Valve Only)
Remarks:	This relief valve is installed to control internal fuselage pressure in the nose wheel and forward electronics compartment area.
Limitation:	(1) This change must be incorporated before missile and/or rocket firing. (2) Do not operate aircraft above 5000 feet with electronic equipment installed.

6. (b) The following limitations though not due to parts shortage, should also be noted.

1.

Description:	Mid-Electronics Door (Data link antenna Installation)
Remarks:	A satisfactory UHF Data Link Antenna has not been developed for incorporation in the mid-electronics door. A similar door deleting the antenna installation has been installed. No limitations are imposed on the aircraft until the MG 10 - Data Link installations are made.

2.

Description:	Missile Launching System
Remarks:	Launcher extension and retraction times are in excess of that required by Model Specification. A fast action system is being developed to be compatible with specification requirements but is not available for incorporation in this airplane. The only limitations or restrictions imposed with this slower system is the reduction in kill probability due to having to stay on target longer periods of time to fire an equivalent number of missiles.

6. (b)
Cont.

3. Description: Vertical Fin Tip
Part No: 8-14520
Quantity: One
Remarks: Due to a vendor shortage, the required fin tip could not be installed. The limitations are concerned with the antenna response which is below standard for a tactical airplane. The substituted YF-102 fin tip does not meet the configuration standards of the F-102A but is a suitable substitute until the shortage fin tip is installed.

7. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 31 July 1955.

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-026
DATE 20 December 1955
MODEL F-102A

TITLE

REPORT NO. ZD-8-026
DOCUMENTATION FOR WAIVERS
FROM CONTRACTUAL REQUIREMENTS
FOR ACCEPTANCE OF

F-102A AIRPLANES AF S/N
53-1803,53-1805,53-1808,53-1809,53-1810

CONTRACT AF33(600)-5942

PREPARED BY ____________

____

CHECKED BY ____________

GROUP Project Specifications

REFERENCE ____________

APPROVED BY ____________

V Parts

NO. OF DIAGRAMS ____________

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
"A"	1-14-56	WMG	Additions or revisions made to all parts I thru V.	All

FORM 1612A-4

This report is prepared to define the condition of these airplanes as of factory completion for acceptance by the Air Force.

Waivers for the following airplanes are contained in their respective parts as noted:

A/C Ser. No.	Part
53-1803	Part I
53-1805	Part II
53-1808	Part III
53-1809	Part IV
53-1810	Part V

REPORT NO. ZD-8-026

PART I

WAIVERS FOR AIRPLANE

SERIAL NO. 53-1803

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 53-1803.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 16 December 1955, are as follows:

ECP No. (CAC-F-102-)	Title
233rl	Finish Requirements - Change of:
1020	Landing Gear Warning System - Positive Warning
1022	Elevator - Change from 10° to 8° Down Surface Travel
1024	Cockpit Ground Air Conditioning - Change of:
1031	Pratt & Whitney P-23 Engine Changes - Group II
1037	2" Rockets - Installation of:
1065	Oxygen Cylinder Bottle - Addition of:
1068	Pratt & Whitney P-23 Engine Changes - Group III
1075	MM-2 Altitude Indicator - Interim Installation of:
1087	Constant Speed Drive Oil System - Rev. of:

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 20 December 1955, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	3-15-56
ZS-8-058	Control System Analysis	1-2-56

2. (Cont.)

EXHIBIT "A": Paragraph (g)
Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbook to be replaced with regular Flight Handbook in March 1956.

3. Equipment listed in the "Equipment Approval Status Record," Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 16 December 1955.

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report. (EPD) Expected Parts Delivery Date.

Quantity	Description	Part No.
1	Fin Disconnect Potentiometer Instl. 8-61909 Interim Part, UN 110-2-1 Installed (EPD 2-10-56)	UN 110-2
1	Valve Recirculating Oil Instl. 8-22947 GFAE Part No. 660599 (EPD 1-4-56 Pending A. F. Approval)	8-22947-7
1	Fuel Flow Joiner Instl. 8-27401 (EPD 3-27-56)	REG 150-3
1	Control Box - Elevon Trim Servo Instl. 8-68190 Interim UN 110-1-1 Installed (EPD 2-10-56) For 1803	UN 110-1
1	Transducer Installation - Elevon Trim Instl. 8-49393 Interim UN 110-3-1 Installed (EPD 2-9-56)	UN 110-3

4. PART A (Cont)

Quantity	Description	Part No.
1	Intervalometer - Missile Equipment Instl. Instl. 8-67186 (EPD 1-3-56)	UN 120
1	Intervalometer - Rocket Equipment Instl. Instl. 8-67186 (EPD 1-3-56)	UN 66-2
1	Transformer - Windshield Anti-Ice Instl. 8-68210 (EPD - To be determined, Development Item)	TRA 294
4	Cable & Linkage Installation Interim Substitute Installed (TVA 41899) (EPD - To be determined, Development Item)	SEAL 175
1 Ea	Window Installation - Canopy Instl. 8-73815 Interim Windows 8-73856-3,-4 Installed (EPD 7-7-56)	8-73815-7 8-73815-8
2 Ea	Duct Installation - Jet Pump Cooling Instl. 8-98010 (EPD 1-31-56)	DU 197-3
2 Ea	Armament Control System Instl. 8-38020 Interim LI 304 Installed (EPD 1-31-56)	LI 320

4. PART B Shortages as listed in Air Force Form 263C, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

Description: Pilot Assist - Operation
(Ref. ACA 8-754 and 8-884

Part No:
1. Suitable Pitch "G" Limiter
2. Suitable Roll Coupling Limiter
(Ref. ACA 8-754 and 8-884)

Quantity: One Each

4. PART B (Cont)

Limitation: Item 2 must be Flight Tester prior to activation of Pilot Assist. Until Item 1. is installed, Pilot Assist will be operated only with the following Elevator Limit Switch Settings; ± 2.3° above 15,000 feet or below M=0.6; ±1.0° above M=0.6 altitudes below 15,000 feet.

Description: Roll Maneuver Limitations (Ref. ACA 8-754 and 8-884)

Part No: Suitable Roll Coupling Limiter

Quantity: One

Remarks: Until the Roll Coupling Limiter, Ref. ACA 8-754 and 8-884 have been satisfactorily flight tested, the following flight limitations must be observed.

Limitation: Roll Rate is limited to 100°/Sec. for changes in Bank Angle of 100°.

For continuous Roll Maneuvers, Aileron Angle is restricted to ± 4. with Roll Rate not to exceed 80°/Sec.

NOTE: All Roll Maneuvers are restricted to altitudes in excess of 12,000 feet pressure altitude in order to prevent excessive side loads.

Description: Pitch and Yaw damper operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a Pitch "G" Limiter, Pitch Damper System shall not be used below 12,000 feet altitude at speeds above 480 knots.

Description: Missile Intervalometer Installation (Ref. ECP 1034)

Part No: CVAC Un 120 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing Missiles or opening doors in the Missile Mode.

Description: Rocket Intervalometer Installation (Ref. ACA 8-12781NF)

Part No: 1. CVAC UN 66-2 Intervalometer

4. PART B (Cont)

Quantity: One

Limitation: Must be installed prior to firing rockets or opening doors in the Rocket Mode.

Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15401)

Part No: CVAC FE 23-5 and GFAE #660599

Quantity: One each

Limitation: Until ACA 8-15401 is accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. Power may occur.

Description: Take-off Trim Position (Ref. Differential Linkage Installation, ACA 8-500)

Part No: CVAC UN 110-5

Quantity: One

Remarks: Interim substitution of elevator trim actuator ACTU 13-7 (Per TVA 41411 on Drawing 8-49346) for Un 110-5 imposes the following limitation.

Limitation: Until such time that interim ACTU 13-7 is replaced by UN110-5, pilot must trim elevator from stick button to some position above 5 degrees UP before take-off trim circuit will function as designed.

NOTE: Elevator will not trim to 5 degrees UP position on take-off trim circuit if starting position is less than 5 degrees up. Installation of UN 110-5 lifts the limitation.

Description: Windshield Anti-Ice Circuit - Add Transformers revise wire gauges and circuits, etc., to increase wattage on NESA glass. (Ref. ACA 8-653 and 8-15496)

4. PART B (Cont.)

Part No: CVAC TRA 294

Quantity: Two

Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the windshield free of ice.

Limitation: The airplane should not be flown in icing conditions until ACA 8-653 and 8-15496 have been incorporated. Also, de-fog may not be provided under extreme conditions.

Description: Armament Control System - Revision of (Ref. ACA 8-15249)

Part No: CVAC LI 320

Quantity: One

Remarks: LI 320 replaces mis-fire light with one that can be tested and dimmed.

Limitation: Missile mis-fire light cannot be tested and dimmed.

Description: Wing Spar Fuselage Attach Bolts

Remarks: Temporary load factor limitations as a result of installation of P/N MS 20010-34 wing spar fuselage attach bolts (Wing Spar No. 6) until optimum bolt is approved.

Limitations: The airplane is temporarily limited to the following:

Symentrical Maneuvers:

1. Normal load factor + 3.1g maximum.
2. Roll rate limited to 100°/Sec. for changes in angle of bank of 100°.
3. Aileron angle is restricted to ± 3.3° (1/2 throw) for all speeds above 420 knots calibrated airspeed for altitudes below 12,000 feet.

4. PART B (Cont)

Description: Electronic Equipment - Ground Cooling of (Ref. ACA 8-16068

Part No: CVAC DU 197-3 Coupling

Quantity: One

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until DU 197-3 is installed.

Description: ACA 8-14914 Wing attach bolts Spar Six - Interim use of MS type

Part No: MS 200010-34 (8 pieces per airplane)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.

Limitation:

a. Symmetrical Maneuvers -

   Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers -

   1. Do not exceed normal load factor of 3.9g maximum.
   2. Do not exceed change in bank angle of 100° maximum.
   3. Do not exceed roll rate of 100°/sec. maximum.
   4. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

Description: Buzz Fix - High Speed (Ref. ACA 8-813

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

4. PART B (Cont)

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number lf 1.25.

Description: Rain Clearing System (Ref. ACA 8-954)

Remarks: Hot air blast shield protects vinyl edge of windshield.

Limitation: Rain clearing system should not be used until ACA 8-954 has been incorporated.

Description: Electronic Equipment - Ground Cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against drawing 8-60674 de-activates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retrading of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opend at idle position and engine deceleration lags.

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263C Part II.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 20 December 1955.

6. List of items not proven to be interchangeable on this airplane at time of final acceptance on 31 January 1956:

Rudder Nose Door	8-15016-39
	8-15016-41
	8-15016-43
Wing Leading Edge Panel Assemblies	8-17230-27
	8-17230-28
	8-17230-29
	8-17230-30
	8-17230-31
	8-17230-32
	8-17230-33
	8-17230-34
	8-17230-35
	8-17230-36
Wing Leading Edge Assemblies	8-17232-1
	8-17232-2
	8-17233-1
	8-17233-2
	8-17234-1
	8-17234-2
	8-17235-1
	8-17235-2
	8-17236-1
	8-17236-2
Wing Tip Assembly	8-17900-9
	8-17900-10
Nose Radome Assembly	8-70410
ATM Access Door Assembly	8-72601-19
Electronics Purge Valve Insp. Door	8-73433-79
Tail Cone Assembly	8-73490
Speed Brake Doors	8-73614-3
	8-73614-4
Mid Electronics Door	8-73608-25

ANALYSIS
PREPARED BY
CHECKED BY
REVISED BY

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

A/C Ser. No. 53-1805
PAGE 1
REPORT NO. ZD-8-026
MODEL F-102A
DATE 20 Dec 1955

REPORT NO. ZD-8-026

PART II

WAIVERS FOR AIRPLANE
SERIAL NO. 53-1805

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 53-1805.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 16 December 1955, are as follows:

ECP No. (CAC-F-102-)	Title
233r1	Finish Requirements - Change of:
1020	Landing Gear Warning System - Positive Warning
1022	Elevator - Change from 10° to 8° Down Surface Travel
1024	Cockpit Ground Air Conditioning - Change of:
1031	Pratt & Whitney P-23 Engine Changes - Group II
1037	2" Rockets - Installation of:
1065	Oxygen Cylinder Bottle - Addition of:
1068	Pratt & Whitney P-23 Engine Changes - Group III
1075	MM-2 Altitude Indicator - Interim Installation of:
1087	Constant Speed Drive Oil System - Rev. of:

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 20 December, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	3-15-56
ZS-8-058	Control System Analysis	1-2-56

2. (Cont.)

EXHIBIT "A": Paragraph (g)
Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbook to be replaced with regular Flight Handbook in March 1956.

3. Equipment listed in the "Equipment Approval Status Record," Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 16 December 1955.

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report. (EPD Expected Part Delivery Date)

Quantity	Description	Part No.
1	Fin Disconnect Potentiometer Instl. 8-61909 Interim Part, UN 110-2-1 Installed (EPD 2-10-56)	UN 110-2
1	Valve Recirculating Oil Instl. 8-22947 GFAE Part No. 660599 (EPD 1-4-56 Pending A. F. Approval)	8-22947-7
1	Fuel Flow Joiner Instl. 8-27401 (EPD 3-27-56)	REG 150-3
1	Control Box - Elevon Trim Servo Instl. 8-68190 Interim UN 110-1-1 Installed (EPD 2-10-56) For 1803	UN 110-1
1	Transducer Installation - Elevon Trim Instl. 8-49393 Interim Un 110-3-1 Installed (EPD 2-9-56)	UN 110-3

4. PART A (Cont)

Quantity	Description	Part No.
1	Intervalometer - Missile Equipment Instl. Instl. 8-67186 (EPD 1-3-56)	UN 120
1	Intervalometer - Rocket Equipment Instl. Instl. 8-67186 (EPD 1-3-56)	UN 66-2
1	Transformer - Windshield Anti-Ice Instl. 8-68210 (EPD - To be Determined, Development Item) (EPD	
4	Cable & Linkage Installation Interim Substitute Installed (TVA 41899) (EPD - To be Determined, Development Item)	SEAL 175
1 Ea	Window Installation - Canopy Instl. 8-73815 Interim Windows 8-73856-3, -4 Installed (EPD 7-7-56)	8-73815-7 8-73815-8
2 Ea	Duct Installation - Jet Pump Cooling Instl. 8-98010 (EPD 1-3-56)	DU 197-3
2 Ea	Armament Control System Instl. 8-38020 Interim LI 304 Installed (EPD 1-31-56)	LI 320

4. PART B Shortages as listed in Air Force form 263C, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

Description: Pilot Assist - Operation of (Ref. ACA 8-754 and 8-884)

Part No:
1. Suitable Pitch "G" Limiter
2. Suitable Roll Coupling Limiter (Ref. ACA 8-754 and 8-884)

Quantity: One Each

Limitation: Item 2 must be flight tested prior to activation of Pilot Assist. Until Item 1, is installed, Pilot Assist will be operated only with the following Elevator Limit Switch Settings;

4. PART B (Cont)

Limitations: (Cont) ± 2.3° above 15,000 feet or below M=0.6; ±1.0° above M=0.6 altitudes below 15,000 feet.

Description: Roll Maneuver Limitations (Ref. ACA 8-754 and 8-884)

Part No: Suitable Roll Coupling Limiter

Quantity: One

Remarks: Until the Roll Coupling Limiter, Ref. ACA 8-754 and 8-884 have been satisfactorily flight tested, the following flight limitations must be observed.

Limitation: Roll Rate is limited to 100°/Sec. for changes in Bank Angle of 100°.

For continuous Roll Maneuvers, Aileron Angle is restricted to ± 4° with Roll Rate not to exceed 80°/Sec.

NOTE: All Roll Maneuvers are restricted to altitudes in excess of 12,000 feet pressure altitude in order to prevent excessive side loads.

Description: Pitch and Yaw Damper Operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a Pitch "G" Limiter, Pitch Damper System shall not be used below 12,000 feet altitude at speeds above 480 knots.

Description: Missile Intervalometer Installation (Ref. ECP 1034)

Part No: CVAC UN 120 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing Missiles or opening doors in the Missile Mode.

Description: Rocket Intervalometer Installation (Ref. ACA 8-12781NF)

Part No: CVAC UN 66-2 Intervalometer

4. PART B (Cont.)

Remarks: Until the Roll Coupling Limiter, Ref. ACA 8-754 and 8-884 have been satisfactorily flight tested, the following flight limitations must be observed.

Limitation: Roll Rate is limited to 100°/Sec. for changes in Bank Angle of 100°.

For continuous Roll Maneuvers, Aileron Angle is restricted to ±4° with Roll Rate not to exceed 80°/Sec.

NOTE: All Roll Maneuvers are restricted to altitudes in excess of 12,000 feet pressure altitude in order to prevent excessive side loads.

Description: Pitch and Yaw Damper Operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a Pitch "G" Limiter, Pitch Damper System shall not be used below 12000 feet altitude at speeds above 480 knots.

Description: Missile Intervalometer Installation (Ref. ECP 1034)

Part No: CVAC UN 120 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing Missiles or opening doors in the Missile Mode

Description: Rocket Intervalometer Installation (Ref. ACA 8-12781NF)

Part No: CVAC UN 66-2 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing rockets or opening doors in the Rocket Mode.

4. PART B (Cont)

Quantity: One

Limitation: Must be installed prior to firing rockets or opening doors in the Rocket Mode.

Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15401)

Part No: CVAC FI 23-5 and GFAE #660599

Quantity: One each

Limitation: Until ACA 8-15401 is accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. Power may occur.

Description: Take-off Trim Position

Part No: CVAC UN 110-5

Quantity: One

Remarks: Interim subsittution of elevator trim actuator ACTU 13-7 (Per TVA 41411 on Drawing 8-49346) for UN 110-5 imposes the following limitation.

Limitation: Until such time that interim ACTU 13-7 is replaced by UN 110-5, pilot must trim elevator from stick button to some position above 5 degrees UP before take-off trim circuit will function as designed.

NOTE: Elevator will not trim to 5 degrees UP position on take-off trim circuit if starting position is less than 5 degrees up. Installation of UN 110-5 lifts the limitation.

Description: Windshield Anti-Ice Circuit - Add Transformers, revise wire gauges and circuits, etc., to increase wattage on NESA glass. (Ref. ACA 8-653 and 8-15496)

Part No: CVAC TRA 294

Quantity: Two

4. PART B (Cont.)

Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the windshield free of ice.

Limitation: The airplane should not be flown in icing conditions until ACA 8-653 and 8-15496 have been incorporated. Also, de-fog may not be provided under extreme conditions.

Description: Armament Control System - Revision of (Ref. ACA 8-15249)

Part No: CVAC LI 320

Quantity: One

Remarks: LI 320 replaces mis-fire light with one that can be tested and dimmed.

Limitations: Missile mis-fire light cannot be tested and dimmed.

Description: Wing Spar Fuselage Attach Bolts

Remarks: Temporary load factor limitations as a result of installation of P/N MS 20010-34 wing spar fuselage attach bolts (Wing Spar No. 6) until optimum bolt is approved.

Limitations: The airplane is temporarily limited to the following:

Symentrical Maneuvers:

1. Normal load factor + 3.1g maximum.
2. Roll rate limited to 100°/Sec. for changes in angle of bank of 100°.
3. Aileron angle is restricted to ± 3.3° (1/2 throw) for all speeds above 420 knots calibrated airspeed for altitudes below 12,000 feet.

4. PART B (Cont.)

Description: Electronic Equipment - Ground Cooling of (Ref. ACA 8-16068)

Part No: CVAC DU 197-3 Coupling

Quantity: One

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until DU 197-3 is installed.

Description: Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against drawing 8-60674 deactivates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

Description: Rain Clearing System (Ref. ACA 8-954)

Remarks: Hot air blast shield protects vinyl edge of windshield.

Limitation: Rain clearing system should not be used until ACA 8-954 has been incorporated.

Description: ACA 8-14914. Wing attach bolts Spar Six-Interim use of MS type.

Part No: MS 20010-34 (8 pieces per airplane)

4. PART B (Cont.)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.

Limitation: a. Symmetrical Maneuvers -

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers -

1. Do not exceed normal load factor of 3.9g maximum.
2. Do not exceed change in bank angle of 100° maximum.
3. Do not exceed roll rate of 100°/sec. maximum.
4. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

Description: Buss Fix - High Speed
(Ref. ACA 8-813)

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

4. PART C Work tasks not accomplished on this airplane at time of final acceptance, shall be referenced in Air Force Form 263C, Part II.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 20 December 1955.

6. List of items not proven to be interchangeable on this airplane at time of final acceptance on 31 January 1956:

Rudder Nose Door	8-15016-39 8-15016-41 8-15016-43
Wing Leading Edge Panel Assemblies	8-17230-27 8-17230-28 8-17230-29 8-17230-30 8-17230-31 8-17230-32 8-17230-33 8-17230-34 8-17230-35 8-17230-36
Wing Leading Edge Assemblies	8-17232-1 8-17232-2 8-17233-1 8-17233-2 8-17234-1 8-17234-2 8-17235-1 8-17235-2 8-17236-1 8-17236-2
Wing Tip Assembly	8-17900-9 8-17900-10
Nose Radome Assembly	8-70410
ATM Access Door Assembly	8-72601-19
Electronics Purge Valve Insp. Door	8-73433-79
Tail Cone Assembly	8-73490
Speed Brake Doors	8-73614-3 8-73614-4
Mid Electronics Door	8-73608-25

ANALYSIS
PREPARED BY
CHECKED BY
REVISED BY

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

A/C Ser. No. 53-1808
PAGE 1
REPORT NO. ZD-8-026
MODEL F-102A
DATE 20 Dec 1955

REPORT NO. ZD-8-026

PART III

WAIVERS FOR AIRPLANE

SERIAL NO. 53-1808

FORM 1818-A

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 53-1808.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 16 December 1955, are as follows:

ECP No. (CAC-F-102-)	Title
$233r_1$	Finish Requirements - Change of:
1020	Landing Gear Warning System - Positive Warning
1022	Elevator - Change from 10° to 8° Down Surface Travel
1024	Cockpit Ground Air Conditioning - Change of:
1031	Pratt & Whitney P-23 Engine Changes Group II
1037	2" Rockets - Installation of:
1041	MG-10 Changes - Group IV (Prod.)
1065	Oxygen Cylinder Bottle - Addition of:
1068	Pratt & Whitney P-23 Engine Changes - Group III
1075	MM-2 Altitude Indicator - Interim Installation of:
1079	MG-10 Changes - Group V (Prod.)
1087	Constant Speed Drive Oil System - Rev. Of:

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 20 December 1955, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	3-15-56
ZS-8-058	Control System Analysis	1-2-56

EXHIBIT "A": Paragraph (g)
Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbook to be replaced with regular Flight Handbook in March 1956.

3. Equipment listed in the "Equipment Approval Status Record," Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report. (EPD Expected Parts Delivery Date)

Quantity	Description	Part No.
1	Fin Disconnect Potentiometer Instl. 8-61909 Interim Part, UN 110-2-1 Installed (EPD 2-10-56)	UN 110-2
1	Valve Recirculating Oil Instl. 8-22947 GFAE Part No. 660599 (EPD 1-4-56 Pending A. F. Approval)	8-22947-7
1	Fuel Flow Joiner Instl. 8-27401 (EPD 3-27-56)	REG 150-3
1	Control Box - Elevon Trim Servo Instl. 8-68190 Interim UN 110-1-1 Installed (EPD 2-10-56) For 1803	UN 110-1
1	Transducer Installation - Elevon Trim Instl. 8-49393 Interim UN 110-3-1 Installed (EPD 2-9-56)	UN 110-3
1	Intevalometer - Missile Equipment Instl. Instl. 8-67186 (EPD 1-3-56)	UN 120
1	Intervalometer - Rocket Equipment Instl. Instl. 8-67186 (EPD 1-3-56)	UN 66-2
1	Transformer - Windshield Anti-Ice Instl. 8-68210 (EPD - To Be Determined, Development Item)	TRA 294
4	Cable & Linkage Installation Interim Substitute Installed (TVA 41899) (EPD - To Be Determined, Development Item)	SEAL 175

4. PART A (Cont.)

Quantity	Description	Part No.
1 Ea	Window Installation - Canopy Instl. 8-73815 Interim Windows 8-73856-3, -4 Installed (EPD 7-7-56)	8-73815-7
2 Ea	Duct Installation - Jet Pump Cooling Instl. 8-98010 (EPD 1-31-56)	DU 197-3
2 Ea	Armament Control System Instl. 8-38020 Interim L1 304 Installed (EPD 1-31-56)	L1 320
1	Nadar Recorder Instl. 8-30010 (EPD 3-15-56)	423049-100 H.A.C. P/N

4. PART B Shortages as listed in Air Force form 263C, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

Description: Pilot Assist - Operation of (Ref. ACA 8-754 and 8-884)

Part No:
1. Suitable Pitch "G" Limiter
2. Suitable Roll Coupling Limiter (Ref. ACA 8-754 and 8-884)

Quantity: One each

Limitation: Item 2 must be flight tested prior to activation of Pilot Assist. Until Item 1 is installed, Pilot Assist will be operated only with the following Elevator Limit Switch Settings; ±2.3° above 15,000 feet or below M=0.6; ±1.0° above M=0.6 at altitudes below 15,000 feet.

Description: Roll Maneuver Limitations (Ref. ACA 8-754 and 8-884)

Part No: Suitable Roll Coupling Limiter

Quantity: One

Remarks: Until the Roll Coupling Limiter, Ref. ACA 8-754 and 8-884 have been satisfactorily flight tested, the following flight limitations must be observed.

Limitation: Roll Rate is limited to 100°/Sec. for changes in Bank Angle of 100°.

For continuous Roll Maneuvers, Aileron Angle is restricted to ±4° with Roll Rate not to exceed 80°/Sec.

NOTE: All Roll Maneuvers are restricted to altitudes in excess of 12,000 feet pressure altitude in order to prevent excessive side loads.

4. PART B (Cont.)

Description: Pitch and Yaw Damper Operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a Pitch "G" Limiter, Pitch Damper System shall not be used below 12,000 feet altitude at speeds above 480 knots.

Description: Missile Intervalometer Installation (Ref. ECP 1034)

Part No: CVAC UN 120 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing Missiles or opening doors in the Missile Mode.

Description: Rocket Intervalometer Installation (Ref. ACA 8-12781NF)

Part No: CVAC UN 66-2 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing rockets or opening doors in the Rocket Mode.

Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15401)

Part No: CVAC FI23-5 and GFAE #660599

Quantity: One each

Limitation: Until ACA 8-15401 is accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A. C. Power may occur.

4. PART B (Cont.)

Description:	Take-Off Trim Position
Part No:	CVAC UN 110-5
Quantity:	One
Remarks:	Interim substitution of elevator trim actuator ACTU 13-7 (Per TVA 41411 on drawing 8-49346) for UN 110-5 imposes the following limitation.
Limitation:	Until such time that interim ACTU 13-7 is replaced by UN 110-5, pilot must trim elevator from stick button to some position above 5 degrees UP before take-off trim circuit will function as designed. NOTE: Elevator will not trim to 5 degrees UP position on take-off trim circuit if starting position is less than 5 degrees up. Installation of UN 110-5 lifts the limitation.
Description:	Windshield Anti-Ice Circuit - Add Transformers, revise wire gauges, and circuits, etc., to increase wattage on NESA GLASS. (Ref. ACA 8-653 and 8-15496)
Part No:	CVAC TRA 294
Quantity:	Two
Remarks:	Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the windshield free of ice.
Limitation:	The airplane should not be flown in icing conditions until ACA 8-653 and 8-15496 have been incorporated. Also, de-fog may not be provided under extreme conditions.

4. PART B (Cont.)

Description: Armament Control System - Revision of (Ref. ACA 8-15249)

Part No: CVAC LI 320

Quantity: One

Remarks: LI 320 replaces mis-fire light with one that can be tested and dimmed.

Limitation: Missile mis-fire light cannot be tested and dimmed.

Description: Wing Spar Fuselage Attach Bolts

Remarks: Temporary load factor limitations as a result of installation of P/N MS 20010-34 wing spar fuselage attach bolts (Wing Spar No. 6) until optimum bolt is approved.

Limitations: The airplane is temporarily limited to the following:

Symentrical Maneuvers:

1. Normal load factor + 3.1g maximum.
2. Roll rate limited to 100°/Sec. for changes in angle of bank of 100°.
3. Aileron angle is restricted to ± 3.3° (1/2 throw) for all speeds above 420 knots calibrated airspeed for altitudes below 12,000 feet.

Description: Electronic Equipment - Ground Cooling of Ref. ACA 8-16068

Part No: CVAC DU 197-3 Coupling

Quantity: One

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until DU 197-3 is installed.

4. PART B (Cont.)

Description:	Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)
Remarks:	TVA 38104A against drawing 8-60674 de-activates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.
Reason:	Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.
Limitation:	No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

Description:	Rain Clearing System (Ref. ACA 8-954)
Remarks:	Hot air blast shield protects vinyl edge of windshield.
Limitation:	Rain clearing system should not be used until ACA 8-954 has been incorporated.

Description:	ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.
Part No:	MS 20010-34 (8 pieces per airplane)
Remarks:	Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.

Limitation:

a. Symmetrical Maneuvers -

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers -

1. Do not exceed normal load factor of 3.9g maximum.

4. PART B (Cont.)

Limitation: (Cont.)

b. Asymmetrical Maneuvers - (Cont.)

2. Do not exceed change in bank angle of 100° maximum.
3. Do not exceed roll rate of 100°/sec. maximum.
4. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

Description: Buss Fix - High Speed
Ref. ACA 8-813

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263C, Part II.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 20 December 1955.

6. List of items not proven to be interchangeable on this airplane at time of final acceptance on 31 January 1956:

Rudder Nose Door	8-15016-39 8-15016-41 8-15016-43
Wing Leading Edge Panel Assemblies	8-17230-27 8-17230-28 8-17230-29 8-17230-30 8-17230-31 8-17230-32 8-17230-33 8-17230-34 8-17230-35 8-17230-36
Wing Leading Edge Assemblies	8-17232-1 8-17232-2 8-17233-1 8-17233-2 8-17234-1 8-17234-2 8-17235-1 8-17235-2 8-17236-1 8-17236-2
Wing Tip Assembly	8-17900-9 8-17900-10
Nose Radome Assembly	8-70410
ATM Access Door Assembly	8-72601-19
Electronics Purge Valve Insp. Door	8-73433-79
Tail Cone Assembly	8-73490
Speed Brake Doors	8-73614-3 8-73614-4
Mid Electronics Door	8-73608-39

REPORT NO. ZD-8-026

PART IV

WAIVERS FOR AIRPLANE
SERIAL NO. 53-1809

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 53-1809.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 16 December 1955, are as follows:

ECP No. (CAC-F-102-)	Title
233r$_1$	Finish Requirements - Change of:
1020	Landing Gear Warning System - Positive Warning
1022	Elevator - Change from 10° to 8° Down Surface Travel
1024	Cockpit Ground Air Conditioning - Change of:
1031	Pratt & Whitney P-23 Engine Changes - Group II
1037	2" Rocket - Installation of:
1041	MG-10 Changes - Group IV (Prod.)
1065	Oxygen Cylinder Bottle - Addition of:
1068	Pratt & Whitney P-23 Engine Changes - Group III
1075	MM-2 Attitude Indicator - Interim Installation of:
1079	MG-10 Changes - Group V (Prod.)
1087	Constant Speed Drive Oil System - Rev. of:

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 20 December 1955, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	3-15-56
ZS-8-058	Control System Analysis	1-2-56

2. (Cont.)

EXHIBIT "A": Paragraph (g)
Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbook to be replaced with regular Flight Handbook in March 1956.

3. Equipment listed in the "Equipment Approval Status Record," Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 16 December 1955.

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report. (EPD Expected Part Delivery Date)

Quantity	Description		Part No.
1	Fin Disconnect Potentiometer Instl. 8-61909 Interim Part, UN 110-2-1 Installed (EPD 2-10-56)		UN 110-2
1 Ea	Trim Servo Actuator Instl. Instl. 8-68966 Install with UN 110-5 (EPD 12-20-55)	 Spring Washer Washer	 8-49151 8-49152 8-49152-7
1	Valve Recirculating Oil Instl. 8-22947 GFAE Part No. 660599 (EPD 1-4-56 Pending A.F. Approval)		8-22947-7
1	Fuel Flow Joiner Instl. 8-27401 (EPD 3-27-56)		REG 150-3
1	Elevator Trim Actuator Harness Assy. Instl. 8-68966 Interim ACTU 13-7 & POTE 73 Installed (EPD 12-16-55)		UN 110-5

4. PART A (Cont.)

Quantity	Description	Part No.
1	Control Box - Elevon Trim Servo Instl. 8-68190 Interim UN 110-1-1 Installed (EPD 2-9-56)	UN 110-1
1	Transducer Installation - Elevon Trim Instl. 8-49393 Interim UN 110-3-1 Installed (EPD 2-9-56)	UN 110-3
1	Intevalometer - Missile Equipment Instl. Instl. 8-67186 (EPD 1-3-56)	UN 120
1	Intervalometer - Rocket Equipment Instl. Instl. 8-67186 (EPD 1-3-56)	UN 66-2
1	Transformer - Windshield Anti-Ice Instl. 8-68210 (EPD - To Be Determined, Development Item)	TRA 294
4	Cable & Linkage Installation Interim Substitute Installed (TVA 41899) (EPD - To Be Determined, Development Item)	SEAL 175
1 Ea	Window Installation - Canopy Instl. 8-73815 Interim Windows 8-73856-3, -4 Installed (EPD 7-7-56)	8-73815-7 8-73815-8
2 Ea	Duct Installation - Jet Pump Cooling Instl. 8-98010 (EPD 1-31-56)	DU 197-3
2 Ea	Armament Control System Instl. 8-38020 Interim L1 304 Installed (EPD 1-31-56)	L1 320
1	Nadar Recorder Instl. 8-30010 (EPD 3-15-56)	423049-100 H.A.C. P/N

4. PART B Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or the intended usage.

Description: Pilot Assist
(Ref. ACA 8-754 8-810
8-884 8-734
8-735

Part No:

1. Suitable Pitch "G" Limiter.
2. Suitable Roll Coupling Limiting Device (Ref. ACA 8-754, 8-884)
3. Elevator Limit Switches (Ref. ACA 8-735, 8-810)
4. Aileron Limit Switches (Ref. ACA 8-734)

Description: Pilot Assist - Operation of (Ref. ACA 8-754 and 8-884)

Part No:

1. Suitable Pitch "G" Limiter
2. Suitable Roll Coupling Limiter (Ref. ACA 8-754 and 8-884)

Quantity: One each

Limitation: Item 2 must be flight tested prior to activation of Pilot Assist. Until Item 1 is installed, Pilot Assist will be operated only with the following Elevator Limit Switch Settings:

±2.3° above 15,000 feet or below M=0.6;
±1.0° above M=0.6 at altitudes below 15,000 feet.

Description: Roll Maneuver Limitations (Ref. ACA 8-754 and 8-884)

Part No: Suitable Roll Coupling Limiter

Quantity: One

4. PART B (Cont.)

Remarks: Until the Roll Coupling Limiter, Ref. ACA 8-754 and 8-884 have been satisfactorily flight tested, the following flight limitations must be observed.

Limitation: Roll Rate is limited to 100°/Sec. for changes in Bank Angle of 100°.

For continuous Roll Maneuvers, Aileron Angle is restricted to ±4° with Roll Rate not to exceed 80°/Sec.

NOTE: All Roll Maneuvers are restricted to altitudes in excess of 12,000 feet pressure altitude in order to prevent excessive side loads.

Description: Pitch and Yaw Damper Operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a Pitch "G" Limiter, Pitch Damper System shall not be used below 12,000 feet altitude at speeds above 480 knots.

Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15401)

Part No: CVAC FI 23-5 and GFAE #660599

Quantity: One each

Limitation: Until ACA 8-15402 is accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. power may occur.

Description: Missile Intervalometer Installation (Ref. ECP 1034)

4. PART B (Cont'd)

Part No: CVAC UN 120 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing Missiles or opening doors in the Missile Mode.

Description: Rocket Intervalometer Installation (Ref. ACA 8-12781 NF)

Part No: CVAC UN 66-2

Quantity: One

Limitation: Must be installed prior to firing rockets or opening doors in flight in the rocket mode.

Description: Windshield Anti-Ice Circuit - Add transformers, revise wire gauges, and circuits, etc., to increase wattage on Nesa Glass (Ref. ACA 8-653 and 8-15496)

Part No: CVAC TRANS 294

Quantity: Two

Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the windshield free of ice.

Limitation: The airplane should not be flown in icing conditions until ACA 8-653 and 8-15495 have been incorporated, also, de-fog may not be provided under extreme conditions.

Description: Take-Off Trim Position (Ref. Differential Linkage Installation ACA 8-500)

Part No: CVAC UN 110-5

Quantity: One

4. PART B (Cont.)

Remarks: Interim substitution of elevator trim actuator ACTU 13-7 (per TVA 41411 on Dwg. 8-49346) for UN 110-5 imposes the following limitation.

Limitation: Until such time that interim ACTU 13-7 is replaced by UN 110-5, pilot must trim elevator from stick button to some position above 5 degrees UP before take-off trim circuit will function as designed.

NOTE: Elevator will not trim to 5 degrees UP position on take-off trim circuit if starting position is less than 5 degrees up. Installation of UN 110-5 lifts the limitation.

Description: Electronic Equipment - Ground Cooling of (Ref. ACA 8-16068)

Part No: CVAC DU 197-3 Coupling

Quantity: One

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until DU 197-3 is installed.

Description: Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against drawing 8-60674 deactivates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

4. PART B (Cont.)

Description: Armament Control System - Revision of (Ref. ACA 8-15249)

Part No: CVAC LI 320

Quantity: One

Remarks: LI 320 replaces mis-fire light with one that can be tested and dimmed.

Limitation: Missile mis-fire light cannot be tested and dimmed.

Description: Rain Clearing System (Ref. ACA 8-954)

Remarks: Hot air blast shield protects vinyl edge of windshield.

Limitation: Rain clearing system should not be used until ACA 8-954 has been incorporated.

Description: ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.

Part No: MS 20010-34 (8 Pieces per airplane)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.

Limitation:

a. Symmetrical Maneuvers -

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers -

1. Do not exceed normal load factor of 3.9g maximum.
2. Do not exceed change in bank angle of 100° maximum.

4. PART B (Cont.)

Limitation: (Cont.) b. Asymmetrical Maneuvers - (Cont.)

3. Do not exceed roll rate of 100°/sec. maximum.

4. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

Description: Buzz Fix - High Speed (Ref. ACA 8-813)

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263C, Part II.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 20 December 1955.

6. List of items not proven to be interchangeable on this airplane at time of final acceptance on 31 January 1956:

Rudder Nose Door	8-15016-39
	8-15016-41
	8-15016-43
Wing Leading Edge Panel Assemblies	8-17230-27
	8-17230-28
	8-17230-29
	8-17230-30
	8-17230-31
	8-17230-32
	8-17230-33
	8-17230-34
	8-17230-35
	8-17230-36
Wing Leading Edge Assemblies	8-17232-1
	8-17232-2
	8-17233-1
	8-17233-2
	8-17234-1
	8-17234-2
	8-17235-1
	8-17235-2
	8-17236-1
	8-17236-2
Wing Tip Assembly	8-17900-9
	8-17900-10
Nose Radome Assembly	8-70410
ATM Access Door Assembly	8-72601-19
Electronics Purge Valve Insp. Door	8-73433-79
Tail Cone Assembly	8-73490
Speed Brake Doors	8-73614-3
	8-73614-4
Mid Electronics Door	8-73608-39

REPORT NO. ZD-8-026

PART V

WAIVERS FOR AIRPLANE
SERIAL NO. 53-1810

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 53-1810.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 16 December 1955, are as follows:

ECP No. (CAC-F-102-)	Title
$233r_1$	Finish Requirements - Change of:
1020	Landing Gear Warning System - Positive Warning
1022	Elevator - Change from 10° to 8° Down Surface Travel
1024	Cockpit Ground Air Conditioning - Change of:
1031	Pratt & Whitney P-23 Engine Changes - Group II
1037	2" Rocket - Installation of:
1041	MG-10 Changes - Group IV (Prod.)
1065	Oxygen Cylinder Bottle - Addition of:
1068	Pratt & Whitney P-23 Engine Changes - Group III
1075	MM-2 Altitude Indicator - Interim Installation of:
1079	MG-10 Changes - Group V (Prod.)
1087	Constant Speed Drive Oil System - Rev. Of:

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 20 December 1955, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	3-15-56
ZS-8-058	Control System Analysis	1-2-56

2. (Cont.)

EXHIBIT "A": Paragraph (g)
Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbook to be replaced with regular Flight Handbook in March 1956.

3. Equipment listed in the "Equipment Approval Status Record," Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 16 December 1955.

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report. (EPD Expected Parts Delivery Date)

Quantity	Description	Part No.
1	Fin Disconnect Potentiometer Instl. 8-61909 Interim Part, UN 110-2-1 Installed (EPD 2-10-56)	UN 110-2
1	Valve Recirculating Oil Instl. 8-22947 GFAE Part No. 660599 (EPD 1-4-56 Pending A. F. Approval)	8-22947-7
1	Fuel Flow Joiner Instl. 8-27401 (EPD 3-27-56)	REG 150-3
1	Control Box - Elevon Trim Servo Instl. 8-68190 Interim UN 110-1-1 Installed (EPD 2-10-56) For 1803	UN 110-1
1	Transducer Installation - Elevon Trim Instl.8-49393 Interim UN 110-3-1 Installed (EPD 2-9-56)	UN 110-3

4. PART A (Cont)

Quantity:	Description	Part No.
1	Intervalometer - Missile Equipment Instl. Instl. 8-67186 (EPD 1-3-56)	UN 120
1	Intervalometer - Rocket Equipment Instl. Instl. 8-67186 (EPD 1-3-56	UN 66-2
1	Transformer - Windshield Anti-Ice Instl. 8-68210 (EPD - To be determined, Development Item)	TRA 294
4	Cable & Linkage Installation Interim Substitute Installed (TVA 41899) (EPD - To be Determined, Development Item)	SEAL 175
1 Ea	Window Installation - Canopy Instl. 8-73815 Interim Windows 8-73856-3, -4 Installed (EPD 1-3-56)	8-73815-7 8-73815-8
2 Ea	Duct Installation - Jet Pump Cooling Instl. 8-98010 (EPD 1-31-56)	DU 197-3
2 Ea	Armament Control System Instl. 8-38020 Interim LI 304 Installed (EPD 1-31-56)	LI 320

4. PART B Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or the intended usage.

Description: Pilot Assist - Operation
(Ref. ACA 8-754 and 8-884)

Part No:
1. Suitable Pitch "G" Limiter
2. Suitable Roll Coupling Limiter
(Ref. ACA 8-754 and 8-884)

Quantity: One Each

Limitation: Item 2 must be flight tested prior to activation of Pilot Assist. Until Item 1 is installed, Pilot Assist will be operated only with the following Elevator Limit Switch Settings;

4. PART B (Cont)

Limitations: (Cont)	± 2.0° above 15,000 feet or below M=0.6; ±1.0° above M=0.6 at altitudes below 15,000 feet.
Description:	Roll Maneuver Limitations (Ref. ACA 8-754 and 8-884)
Part No:	Suitable Roll Coupling Limiter
Quantity:	One
Remarks:	Until the Roll Coupling Limiter, Ref. ACA 8-754 and 8-884 have been satisfactorily flight tested, the following flight limitations must be observed.
Limitations:	Roll Rate is limited to 100°/Sec for changes in Bank Angle of 100°. For continuous Roll Maneuvers, Aileron Angle is restricted to ± 4° with Roll Rate not to exceed 80°/Sec. NOTE: All Roll Maneuvers are restricted to altitudes in excess of 12,000 feet pressure altitude in order to prevent excessive side loads.
Description:	Pitch and Yaw Damper Operation
Part No:	Suitable Pitch "G" Limiter
Quantity:	One
Limitation:	Without a Pitch "G" Limiter, Pitch Damper System shall not be used below 12,000 feet altitude at speeds above 480 knots.
Description:	Missile Intervalometer Installation (Ref. ECP 1034)
Part No:	CVAC UN 120 Intervalometer
Quantity:	One
Limitation:	Must be installed prior to firing Missiles or opening doors in the Missile Mode.

4. PART B (Cont.)

Description: Rocket Intervalometer Installation (Ref. ACA 8-12781NF)

Part No: CVAC UN 66-2 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing rockets or opening doors in the Rocket Mode.

Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15401)

Part No: CVAC FI 23-5 and GRAE #660599

Quantity: One each

Limitation: Until ACA 8-15401 is accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. Power may occur.

Description: Take-Off Trim Position

Part No: CVAC UN 110-5

Quantity: One

Remarks: Interim substitution of elevator trim actuator ACTU 13-7 (Per TVA 41411 on Drawing 8-49346) for UN 110-5 imposes the following limitation.

Limitation: Until such time that interim ACTU 13-7 is replaced by UN 110-5, pilot must trim elevator from stick button to some position above 5 degrees UP before take-off trim circuit will function as designed.

NOTE: Elevator will not trim to 5 degrees UP position on take-off trim circuit if starting position is less than 5 degrees up. Installation of UN 110-5 lifts the limitation.

4. PART B (Cont.)

Description:	Windshield Anti-Ice Circuit - Add Transformers, revise wire gauges and circuits, etc., to increase wattage on NESA glass. (Ref. ACA 8-653 and 8-15496)
Part No:	CVAC TRA 294
Quantity:	Two
Remarks:	Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the windshield free of ice.
Limitation:	The airplane should not be flown in icing conditions until ACA 8-653 and 8-15496 have been incorporated. Also, de-fog may not be provided under extreme conditions.
Description:	Armament Control System - Revision of (Ref. ACA 8-15249)
Part No:	CVAC LI 320
Quantity:	One
Remarks:	LI 320 replaces mis-fire light with one that can be tested and dimmed.
Limitations:	Missile mis-fire light cannot be tested and dimmed.
Description:	Wing Spar Fuselage Attach Bolts
Remarks:	Temporary load factor limitations as a result of installation of P/N MS 20010-34 wing spar fuselage attach bolts (Wing Spar No. 6) until optimum bolt is approved.
Limitations:	The airplane is temporarily limited to the following: Symentrical Maneuvers: 1. Normal load factor + 3.1g maximum. 2. Roll rate limited to 100°/Sec. for changes in angle of bank of 100°. 3. Aileron angle is restricted to ± 3.3° (1/2 throw) for all speeds above 420 knots calibrated airspeed for altitudes below 12,000 feet.

4. PART B (Cont)

Description: Electronic Equipment - Ground Cooling of Ref. ACA 8-16068

Part No: CVAC DU 197-3 Coupling

Quantity: One

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until DU 197-3 is installed.

Description: Electronic Equipment - Ground Cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against drawing 8-60674 de-activates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressures as valve opens at idle position and engine deceleration lags.

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

Description: Rain Clearing System

Remarks: Hot air blast shield protects vinyl edge of windshield.

Limitation: Rain clearing system should not be used until ACA 8-954 has been incorporated.

Description: ACA 8-14914 - Wing attach bolts Spar Six - Interim use of MS type.

Part No: MS 20010-34 (8 pieces per airplane)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.

4. PART B (Cont)

Limitation: a. Symmetrical Maneuvers -

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers -

1. Do not exceed normal load factor of 3.9g maximum.
2. Do not exceed change in baln angle of 100° maximum.
3. Do not exceed roll rate of 100°/Sec. maximum.
4. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

Description: Buzz Fix - High Speed
(Ref. ACA 8-813)

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263C Part II.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 20 December 1955.

6. List of items not proven to be interchangeable on this airplane at time of final acceptance on 31 January 1956:

Rudder Nose Door	8-15016-39 8-15016-41 8-15016-43
Wing Leading Edge Panel Assemblies	8-17230-27 8-17230-28 8-17230-29 8-17230-30 8-17230-31 8-17230-32 8-17230-33 8-17230-34 8-17230-35 8-17230-36
Wing Leading Edge Assemblies	8-17232-1 8-17232-2 8-17233-1 8-17233-2 8-17234-1 8-17234-2 8-17235-1 8-17235-2 8-17236-1 8-17236-2
Wing Tip Assembly	8-17900-9 8-17900-10
Nose Radome Assembly	8-70410
ATM Access Door Assembly	8-72601-19
Electronics Purge Valve Insp. Door	8-73433-79
Tail Cone Assembly	8-73490
Speed Brake Doors	8-73614-3 8-73614-4

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-017
DATE 14 Jan. 1956
MODEL YF-102A

TITLE

REPORT NO. ZD-8-017
LIST OF WAIVERS
FROM CONTRACTUAL REQUIREMENTS
FOR
AF SERIAL NO. 53-1788

CONTRACT AF 33(600)5942

PREPARED BY ____________________

GROUP Project Specifications

REFERENCE ____________________

CHECKED BY ____________________

APPROVED BY ____________________

NO. OF PAGES 2

NO. OF DIAGRAMS ________

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
"A"	2-24-56	WMB	Items 1, 5, 9 "changed" Item 13 "added"	1,2
"B"	11-4-57	WWF	Revised to reflect final configuration of Aircraft at time of final acceptance.	

The following items are waivers from contractual requirements for the Model YF-102A Airplane, AF Serial No. 53-1788:

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have have been submitter to AMC but which have not been approved as of 1 November 1957, are as follows:

   None

2. Engineering data listed in exhibit of the contract which were required to be submitted prior to 1 November 1957 but which had not been submitted as of that date, are as follows:

   None

3. The following are shortages at time of factory completion.

Part A It is anticipated that these items will be reflected in the Air Force Form 263c, Part II, consisting of 45 pages and dated 1 November 1957.

Part B Flight limitations as listed in Department of Defense DD 781, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or the intended usage. Reference T.O. IF-102(Y) (11)-1 dated 31 August 1956.

Part C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263c, Part II, consisting of 45 pages and dated 1 November 1957.

DIVISION San Diego
MODEL YF-102

REPORT ZD-8-008
DATE 15 March 1954
Rev. 30 April 1954

TITLE
REPORT NO. ZD-8-008

LISTING OF AIRPLANE CONFIGURATION

THIRD YF-102 AIRPLANE
AF SERIAL NUMBER 53-1779

CONTRACT AF33(600)-5942

PREPARED BY
GROUP Specification

REFERENCE

CHECKED BY
APPROVED BY

NO. OF PAGES 3
NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

GO 241A

FOREWORD

THIS REPORT IS AN INDEX OF THE APPLICABLE LISTS OF ITEMS TO BE ACCOMPLISHED, AND THEIR STATUS, FOR YF-102 AIRPLANE, SERIAL NUMBER AF53-1779.

1. Airplane Model Specification Number ZD-8-001, Revised 1 Dec 1952, Including all changes issued as of 19 March 1954.

2. Instrumentation Specifications:

   ZC-8-053 dated 15 February 1954, Convair Instrumentation Report (with wiring addendum).

   ZC-8-053-1, dated 15 August 1954, Convair Instrumentation Report (with wiring addendum).

3. List of Open Flight Test Requirements, revised 21 April 1954.

4. List of yellow stripe TVA's and interim equipment list, Revised 1 April 1954. (closed)

5. List of applicable Government Specifications and required inspection reports,(inspection log breakdown) Revised 30 April 1954.

6. Engineering data requirements and reports summary, Report No. ZM-8-072, dated 15 October 1953, revised 1 April 1954.

7. Engineering Change Proposal (ECP) Status Report, Revised 20 March 1954.

8. Equipment Qualification Approval Status Report, Report Number ZM-8-090, dated 19 February 1954, revised 1 April 1954

9. Industry Developed Equipment Approval Status Report ZM-8-091, dated 19 February 1954.

10. Contractor Furnished Equipment Specification Status Report No. ZM-8-092, Revised 1 April 1954.

11. Working List of Interchangeable and Replaceable Parts, Report No. ZM-8-094, dated 1 March 1954, Revised 1 April 1954

12. List of Special Bolts (per R-1800E) Report No. ZM-8-079, dated 15 October 1953.

13. Rubber Parts curing date summary list, dated 18 March 1954.

14. List of Castings by Classification, dated 12 March 1954 revised 1 April 1954.

15. Lubrication List ZM-8-081, Dated 30 March 1954.

16. List of Applicable TO's and Compliance Status, revised 30 April 1954.

17. Historical Records, Revised 30 April 1954.

18. Aircraft Checker Report (Form 2630), Revised 30 April 1954.

19. Engine Preservation Records, Revised 30 April 1954.

20. List of unaccomplished RFA's dated 30 December 1953, Revised 30 April 1954.

21. List of Open Model Specification Discrepancies, revised 30 April 1954.

22. List of open AF Inspection Discrepancies, Revised 1 April 1954. (closed)

23. Index of open Breaks of Inspection (BOI) (CVAC Inspection Form No. 1849) including open IR's dated 1 April 1954. (closed)

24. List of open inspection criticism (CVAC Form No. 27-33A) dated 1 April 1954. (closed)

25. Open Manufacturing Functions (for example OIL 97, OIL 98, Shop Orders, etc.) Revised 30 April 1954.

26. Description of MG-3 Fire Control System Provisions in F-102 Airplanes for First Lot of Production Airplanes, Report No. ZM-8-082, dated 2 November 1953.

27. List of unapproved Materials, dated 1 April 1954.

CONSOLIDATED VULTEE

DIVISION San Diego
MODEL YF-102

REPORT ZD-8-008
DATE 15 March 1954
Rev. 31 August 1954

TITLE
REPORT NO. ZD-8-008

LISTING OF AIRPLANE CONFIGURATION

THIRD YF-102 AIRPLANE
AF SERIAL NUMBER 53-1779

CONTRACT AF33(600)-5942

PREPARED BY

GROUP Specification

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES 2
NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

The following items are waivers from contractual requirements for Model YF-102 airplane, AF Serial No. 53-1779:

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 26 August 1954, are as follows:

ECP No. (CAC-F102-)	Title
58	263 Equipment - Addition of
87	Hydraulic Pressure Gage Light - Change of
89	Engine Compartment Sealant-Change of
93	Engine Ice Detector Installation - Change From Hairpin to Probe Type
95	Temperature Sensing Bulb-Change of
96	Deletion of Residual Heat Doors
133	Windshield Anti-Icing Syst.-Rev To
151	Miscellaneous Specification Deviation and Corrections
176	GFAE-Cor. of Misc. Aerno No's

2. Instrumentation as outlined in Convair Instrumentation Report No. ZC-8-053 dated 15 Feb 1954 (with wiring addendum) Instrumentation as outlined in Convair Instrumentation Report No. ZC-8-053-1 dated 15 August 1954 (with wiring addendum)

3. List of required flight tests, revised 24 August 1954, that have not been accomplished on any airplane as of 26 August 1954.

4. List of parts or equipment, or both, temporarily installed or parts for which installation is postponed as of 1 April 1954 (closed)

5. Engineering data listed in exhibit of the contract which were required to be submitted prior to 26 August 1954 but which had not been submitted as of that date, are as follows (paragraph numbers refer to those of the Contract Exhibit):

Exhibit B, Part I

(A) 6
(B) 14
(C)1(a)
(C)1(c)
(C)3(c)
(C)1(d)
(C)2
(C)4(b)
(C)7
(C)1(b)
(C)3(d)

Exhibit B, Part II

(C) Flight Testing ZU-8-013

(B) Prel. Weapons Effect on Gust ZU-8-004

6. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-090 dated 19 February 1954, revised 10 June 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 26 August 1954.

7. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, revised 25 May 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 26 August 1954.

8. List of castings, revised 29 June 1954, listing castings used on this airplane, certain of which have approved standards and certain of which do not have approved standards as of 26 August 1954.

9. Shortages as listed in Air Force Form 263C, Part II.

10. List of unaccomplished Air Force Inspection Discrepancies revised 1 April 1954 (closed).

11. List of incompleted manufacturing functions (for example, installations or operations due to shortages) as of 30 April 1954 (closed)

12. List of Materials, revised 17 May 1954, listing materials used on this airplane which were not approved as of 26 August 1954.

CONSOLIDATED VULTEE

DIVISION San Diego
MODEL YF-102

REPORT ZD-8-011
DATE 8 June 1954

TITLE
REPORT NO. ZD-8-011
LISTING OF AIRPLANE
CONFIGURATION
SIXTH YF-102 AIRPLANE
AF SERIAL NUMBER 53-1782
CONTRACT AF33(600)-5942

PREPARED BY ______

GROUP Specification

REFERENCE ______

CHECKED BY ______

APPROVED BY ______

NO. OF PAGES 3
NO. OF DIAGRAMS ______

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

FOREWORD

THIS REPORT IS AN INDEX OF THE APPLICABLE LISTS OF ITEMS TO BE ACCOMPLISHED, AND THEIR STATUS, FOR YF-102 AIRPLANE, SERIAL NUMBER AF53-1782

1. Airplane Model Specification ZD-8-001, Revised 1 Dec 1952, as further revised 21 April 1954.

2. ZC-8-056 dated 5-1-54 Convair Instrumentation Report (with wiring addendum)

3. List of Flight Test Requirements, Revised 18 May 1954, including unaccomplished flight tests.

4. Interim equipment and unaccomplished TVA list, Revised 4 June 1954

5. Deleted.

6. Unsubmitted data listed in Engineering Data Requirements and Reports Summary, Report No. ZM-8-072, dated 15 October 1953, Revised 16 April 1954.

7. Unapproved ECP's listed in Engineering Change Proposal (ECP) Status Report, Revised 20 May 1954, including weekly supplements issued 1 June 1954 and 7 June 1954.

8. Unqualified equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-090, dated 19 February 1954, Revised 10 June 1954

9. Unapproved equipment listed in Industry Developed Equipment Approval Status Report No. ZM-8-091, dated 19 February 1954, Revised 25 May 1954.

10. Deleted.

11. Deleted.

12. Deleted.

13. Deleted.

14. Unapproved castings listed in List of Castings by Classification, dated 12 March 1954, Revised 4 June 1954.

15. Deleted.

16. Deleted.

17. Deleted.

18. Shortages as listed in AF Form 263C, Part II.

19. Deleted.

20. Deleted.

21. Deleted.

22. List of open AF Inspection Discrepancies, Revised 8 June 1954.

23. Index of open Breaks of Inspection (BOI) (CVAC Inspection Form No. 1849) including IR's dated 1 June 1954.

24. Deleted.

25. Open Manufacturing Functions (for example OIL 97, OIL 98, Shop Orders, A.L.S.L.) Revised 8 June 1954.

26. Deleted.

27. List of unapproved Materials, dated 1 April 1954, Revised 17 May 1954.

CONSOLIDATED VULTEE

DIVISION San Diego
MODEL YF-102

REPORT ZD-8-011
DATE 8 June 1954
Revised 31 August 1954

TITLE
REPORT NO. ZD-8-011

LIST OF WAIVERS
FROM CONTRACTUAL REQUIREMENTS
FOR
YF-102 AIRPLANE AF S/N 53-1782

CONTRACT AF33(600)-5942

PREPARED BY

GROUP Specifications

REFERENCE

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NO. OF PAGES

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REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
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GD 241A

The following items are waivers from contractual requirements for Model YF-102 airplane, AF Serial No. 53-1782:

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 31 August 1954, are as follows:

ECP No. CAC-F102-	Title
58	263 Equipment - Addition of
87	Hydraulic Pressure Gage Light - Change of
89	Engine Compartment Sealant - Change of
93	Engine Ice Detector Installation - Change from Hairpin to Probe Type
95	Temperature Sensing Bulb - Change of
151	Miscellaneous Specification Deviations and Corrections
176	GFAE - Correction of Miscellaneous Aerno Numbers

2. Instrumentation as outlined in Convair Instrumentation Report No. ZC-8-056 dated 1 May 1954, with wiring addendum, as approved by Contract Change Notification No. 54 dated 20 April 1954 (was originally numbered ZC-8-011).

3. List of required flight tests, revised 24 August 1954, that have not been accomplished on any airplane as of 31 August 1954.

4. List of parts or equipment, or both, temporarily installed or parts for which installation is postponed as of 31 August 1954.

5. Engineering data listed in exhibit of the contract which were required to be submitted prior to 31 August 1954 but which had not been submitted as of that date, are as follows (paragraph numbers refer to those of the Contract Exhibit):

Exhibit B, Part I

(C)1(a)
(C)3(c)
(C)1(d)
(C)7
(A)6
(B)14
(C)1(c)
(C)4b
(C)1(b)

Exhibit B, Part II

(C) Flight Testing ZU-8-013
(B) Preliminary Weapons Effect on Gust ZU-8-004

6. Equipment listed in Equipment Qualification Approval Status Report No. ZM-8-090 dated 19 February 1954, revised 10 June 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 31 August 1954.

7. Equipment listed in Industry Developed Equipment Status Report No. ZM-8-091, dated 19 February 1954, revised 25 May 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 31 August 1954.

8. List of castings, revised 4 June 1954, listing castings used on this airplane, certain of which have approved standards and certain of which do not have approved standards of 31 August 1954.

9. Shortages as listed in Air Force Form 263C, Part II.

10. List of unaccomplished Air Force Inspection Discrepancies revised 31 August 1954.

11. List of incompleted manufacturing functions (for example, installations or operations due to shortages) (closed).

12. List of Materials, revised 17 May 1954, listing materials used on this airplane which were not approved as of 31 August 1954.

CONSOLIDATED VULTEE

DIVISION San Diego
MODEL YF-102

REPORT ZD-8-011
DATE 8 June 1954

TITLE

REPORT NO. ZD-8-011
LIST OF WAIVERS
FROM CONTRACTUAL REQUIREMENTS
FOR
YF-102 AIRPLANE AF S/N 53-1782
CONTRACT AF33(600)-5942

PREPARED BY

GROUP Specification

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

GD 241A

The following items are waivers from contractual requirements for Model YF-102 airplane, AF Serial No. 53-1782:

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 8 June 1954, are as follows:

ECP No. CAC-F102-:	Title
49 Rev	Windshield Cleaners - Change of,
58	263 Equipment - Addition of,
70	Fire Control Systems - Radio, Navigation and Communications Equipment - Requirements for,
77	Miscellaneous Specification Deviations and Corrections
87	Hydraulic Pressure Gage Light - Change of,
89	Engine Compartment Sealant-Change of,
93	Engine Ice Detector Installation - Change From Hairpin to Probe Type
95	Temperature Sensing Bulb-Change of,
98	Anti-"G" Suit Valve-Change of,
103	Compressor Bleed Governor Seal Drain - Inst'l. of,
104	Exhaust Nozzle Control Seal Drain - Inst'l. of,
105	Combustion Chamber Fuel Drain Line - Inst'l of,
106	High Pressure Bleed Duct - Revision of
131	Engine Pump Low Pressure Warning Switch - Relocation of,

2. Instrumentation as outlined in Convair Instrumentation Report No. ZC-8-056 dated 1 May 1954, with wiring addendum, as approved by Contract Change Notification No. 54 dated 20 April 1954 (was originally numbered ZC-8-011).

3. List of required flight tests, revised 18 May 1954, that have not been accomplished on any airplane as of 8 June 1954.

4. List of parts or equipment, or both, temporarily installed or parts for which installation is postponed as of 4 June 1954.

5. Engineering data listed in exhibit of the contract which were required to be submitted prior to 8 June 1954 but which had not been submitted as of that date, are as follows (paragraph numbers refer to those of the Contract Exhibit):

Exhibit B, Part I		Exhibit B, Part II
(C)3(c)	(C)4b	(C) Flight Testing
(C)1(d)	(C)2	ZU-8-013
(C)7		
(A)6		
(B)14		

6. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-090 dated 19 February 1954, revised 10 June 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 8 June 1954.

7. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, revised 25 May 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 8 June 1954.

8. List of castings, revised 4 June 1954, listing castings used on this airplane, certain of which have approved standards and certain of which do not have approved standards of 8 June 1954.

9. Shortages as listed in Air Force Form 263C, Part II.

10. List of unaccomplished Air Force Inspection Discrepancies revised 8 June 1954.

11. List of incompleted manufacturing functions (for example, installations or operations due to shortages) as of 8 June 1954.

12. List of Materials, revised 17 May 1954, listing materials used on this airplane which were not approved as of 8 June 1954.

CONSOLIDATED VULTEE

DIVISION San Diego

MODEL F-102

REPORT ZD-8-006

DATE 10-1-53

Revised 10-15-53
Revised 10-28-53

TITLE

REPORT NO. ZD-8-006
INDEX OF APPLICABLE LISTS
AND STATUS OF FIRST YF-102 AIRPLANE
AF SERIAL NUMBER 52-7994
UNDER
CONTRACT AF33(600)-5942

PREPARED BY JR Rogers
J.R. Rogers
H Kennedy
H.R. Kennedy

CHECKED BY

GROUP Specification

REFERENCE

APPROVED BY
R.R. Hoover

NO. OF PAGES 3

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
A	10-28-53	Priest	Items 4,5,6,8,10,11,16,17,18 and 19 revised	2 & 3
B	10-28-53	Priest	Item 6 revised.	2

Revised 10-15-53
Revised 10-28-53

INTENT

THIS IS AN INDEX OF THE APPLICABLE LISTS OF ITEMS TO BE ACCOMPLISHED, AND THE STATUS OF YF-102 AIRPLANE, SERIAL NUMBER AF52-7994.

REFERENCE CCN #30, MASTER SERIAL NUMBER N-93192, DATED 2 OCTOBER 1953.

Revised 10-15-53
Revised 10-28-53

1. Airplane Model Specification Number ZD-8-001, Revised 1 September 1953.

2. List of open Model Specification discrepancies, dated 2 October 1953.

3. Instrumentation Specification, Report Number ZC-8-051, dated 1 October 1953.

4. List of unaccomplished RFA's dated 5 October 1953, Revised 28 October 1953. (RFA #99, Category II now cleared)

5. List of open B.O.I.'s (CVAC Inspection Form No. 28-51) including open I.R.A.'s dated 5 October 1953. (All items cleared and this item deleted 10-28-53).

6. List of open AF inspection discrepancies, dated 1 October 1953, Revised 10-28-53. ~~with only the following items open:~~

   ~~Electrical: 14,82,105,126,136,137,142,143,144,145~~ (B)

   ~~Mechanical: 40,41,42,43,44,45,46,55,61,105,108,142,145,148~~

7. List of open inspection criticisms (CVAC Form No. 27-33A), dated 5 October 1953.

8. Open manufacturing logs of index (Log Book Audit, Numerical Listing) Including open CVAC inspection discrepancies, dated 28 September 1953, Revised 10-28-53 with only "After Flight" log outstanding as revised 10-28-53.

9. List of yellow stripe T.V.A.'s and interim equipment list, dated 28 September 1953.

10. List of approved Government Specifications (inspection log breakdown), dated 28 September 1953, Revised 10-28-53.

11. List of required inspection reports, dated 5 October 1953, Revised 10-28-53.

12. Engineering data requirements and reports summary, Report Number ZM-8-072 revised 15 October 1953.

13. ECP Status Report, Revised 15 October 1953.

Revised 10-15-53
Revised 10-28-53

14. Equipment Qualification Approval Status Report.

15. Contractor Furnished Equipment Specification Status Report, Revised 15 October 1953.

16. List of applicable T.O.'s and Compliance Status, dated 5 October 1953. Closed 10-28-53 (No T.O.'s outstanding)

17. Historical record, dated 10-28-53.

18. Aircraft Checkers Report, Form 2630, dated October 1953, Revised 10-28-53.

19. Engine Preservation Records, Dated 10-28-53.

20. List of Special Bolts (Per R-1800E), dated 15 October 1953.

21. Rubber parts curing dated summary list, dated 9 October 1953.

22. List of castings by classification, dated 9 October 1953.

REPORTING CYCLE

Procedure for Model & Reporting Cycle:

25th of month issue Form 953 for Contract -40599. This is a budget summary upon which each dept. is supposed to indicate their indicated cost at completion. Two copies are sent, one is to be returned with indicated marked thereon. As these forms are returned, file in indicated cost folder.

Budget reports — total quotation in quote book and enter on forms. Incentive features for budget are marked in quote book. Contract -40599 and small miscellaneous contracts have no incentive.

Actual costs — Small contracts are picked off the cost ledger. Major contracts are tabulated on a statement of accumulated costs.
Statements are provided for:
-31174 - 33695 - 30169 - 33465 - 34414
- 26546 - 46599 - 11333 + Atlas assists.

The Atlas assist statements are hand prepared by Dick Knapp, Plant II Works

The other statements come from tab, who will call you when they are run. Pick up from tab. Have Copy flex copies run on Contracts -11333 & -40599.

On production contracts, except F-108 Wing, record total costs from airplane column (2nd from left) on prepared cost calculation sheet. Then call Knapp and tell him he can pick up the tabulated forms. These, when completed, will be sent back to you in a printed form for our records.

On contracts -11333 & -40599, mark up copy flex copies, use last month's as a guide, and enter actual costs on vellum. Back out previous month's report for current month's actuals. Barbara has been doing this for some time and is familiar with procedure.

When copy flex copies of -11333 & -40599 contracts are made, call the material dept actuals and the S & O & Cancellation reserve figures to Doris Parker, Ext in order to prepare total indicated costs.

Build up indicated costs from information received on Forms 95-3 from the departments + Bullock's manpower spreads.

Rates – D/L play by ear. Overhead, use quote rates except for $4.66 for Engineering and .28 for G.O. for 1961. Use quote overhead rates for 1962. Overhead rates in all cases should be for fixed-price regardless of the type of contract.

Write notes covering contract changes, both for detail and summary reports.

Clear reports and distribute.

Prepare CPFF fee-billing letters on -11333 and -40599 for Hugh Kayes. See previous month's letters. Both in [illegible] front desk

Barbara has distribution on Summary Report.

BUDGET REPORT
DISTRIBUTION

Budget Report Distribution:

	Full Report		← Cut Pages →										
13701	Unmarked	Stamped	Engr.	Offsite	Cust Serv.	Tooling	Factory	Expr.	Palmdale	Plt. Engr.	Insp.	Prod. Flt	Mat'l.
✓ R.D. Evans (file)	1												
✓ Report File	1												
✓ A L Hendricks		1											
✓ N.Y. Office		1											
✓ D.C. Burrows		1											
✓ W.W. Hass		1 *											
✓ J.D. Milling		1 *											
✓ F.S. Chambers		1 *											
✓ E.W. Popham		✓											
G.L. Peyton			5	5									
O.W. Harper					2								
L.J. Solheid					1								
✓ E.H. Damarus						1							
J.B. Henn							1	1	1				
A.L. Buber							1	1					
~~F.J. Parker~~									1				
✓ R.E. Bechtol										1			
✓ H.A. Smith										1			
✓ W.J. Martin											2	2	
W.B. Harwell												1	
W.R. Bruce													1
C.M. Gauss													2
✓ R.A. Neale -13704 + others						1	1						

* Except - 40599 until Management Adjustment removed.

Send copy of Astro Assist projects to W.D. Reed and

CONTRACT NO.	TYPE CONTRACT & INCENTIVE	PROG. PAY. %	NEG. PROFIT %	PROFIT PRICE LIMIT	WORK ORDER SERIES	NUMBER & TYPE AIRPLANES	AIR FORCE SERIAL NUMBERS
Production Contracts							
~~AF33(600)-5942~~	CPFF	100	6	-	5,000	2 F-102 Protos 40 F-102 42 F-102	52-7994 thru 7995 53-1779 thru 1818
~~AF33(600)-23983~~	FPI (30-70)	90	8	11 120	15,000	37 F-102A 20 TF-102A 57 Total	54-1371 thru 1407 54-1351 thru 1370
~~AF33(600)-29264~~	FPI (30-70)	70 **	8	11 135	16,000	108 F-102A 28 TF-102A 136 Total	55-3357 thru 3464 55-4032 thru 4059
AF33(600)-31174 SUMMARY	FPI (20-80)	70 **	8	* 10 * 115	18,000	562 F-102A 63 TF-102A 625 Total	56-957 thru 1518 56-2317 thru 2379
AF33(600)-33695 SUMMARY	FPI (20-80)	70 **	8	10 120	20,000	140 F-102A	57-770 thru 909
AF33(600)-30169 B.S.R.	CPFF	80 ***	6	-	17,000	2 F-106 Protos 15 F-106A 18 F-106A 7 F-106B 42 Total	56-451 thru 452 56-453 thru 467 57-229 thru 246 57-2507 thru 2513
AF33(600)-33808 B.S.R.	FPI (15-85)	70 **	8	* 10 125	19,000	54 F-106A 34 F-106B 88 Total	57-2453 thru 2506 57-2514 thru 2547
AF33(600)-34814 B.S.R.	FPI (20-80)	70	8	11 125	21,000	40 F-106A 5 F-106B 45 Total	58-759 thru 798 58-900 thru 904
AF33(600)-36546 B.S.R.	FPI (15-85)	70	8½	11 125	27,000	148 F-106A 17 F-106B 165 Total	59-001 thru 148 59-149 thru 165
Modification Contracts							
~~AF41(608)-8888~~	FP	70	10	-	22,000	131 F-102A	-
~~AF41(608)-9299~~	FP	-	10	-	24,000	98 F-102A	-
~~AF41(608)-11287~~ B.S	CPFF	80	7	-	505	4 F-102A	GAR-11 Proto Proof
AF41(608)-11233 B.S.R.	CPFF	70	6.01	-	26,000	8 F-106A 1 F-106B 9 Total	(Test to Tactical (Mod.
AF33(600)-38050 B.S.R.	CPFF	80	6½	-	469-499	2 T-29B	FMIC Mod.
Miscellaneous Contracts							
AF41(608)-10844 ?	CPFF	80	5½	-	409	F/TF-102A Tool Storage	
AF33(600)-40599 B.S.R.	CPFF		6	-	521-522	SAGE & AAD Flight Test Programs	

* Plus Performance Profit

** 75% Prior to 9-1-57

*** 100% Prior to 11-1-57

Serv Eng
Sam Stevens — 2638
Field Serv:
Wally Fenton — 2711

List of Contacts:

	Ext	MAIL ZONE	
Contracts:			
A. J. Reiser	1018-2061	(11-10)	Model 8
D. R. Stewart	1444		"
E. R. Joos	1728-1168		"
O. N. Patterson	1302		Tool Storage
G. R. Vetter	666		Asto Assist
Engineering:			
J. F. Snyder – S. Menas	1900	(61-20)	Model 8
J. DeLeonardis	1277		Astro Assist
Customer Service			
L. J. Solheid	2035-2068	(15-60)	Ser Pubs.
Tooling			
R. L. Bolick	1545	(400-20)	
Factory & Expr.			
J. B. Nenn	1267	(13-00)	
A. L. Buber	456-522	(13-01)	
Material			
Doris Parker	83-2542		
Cost Actg			
Dick Knapp	81-564 or 81-730	(91-12)	
Astro Assist Mfg.			
W. D. Reed	81-1295	(200-12)	
E. O. Johnson	81-386	(200-11)	

-11333

Form No.95-0-14
GD/CONVAIR
PROJ.BUDGETS, Ext.2044
Issue # 25 Date

PROJECT BUDGET STATUS REPORT

TITLE TEST TO TACTICAL MODIFICATION 35 F-106A/B Aps.
CONTRACT AF41(608)-11333 TYPE C
W.O. NO. 26XXX SERIES PERIOD ENDED 30 NOVEMBER 1

	Actual Expenditures			Indicated Total Cost	
ENGINEERING DESIGN & LIAISON	Since 12-31-61	Cumulative to Date	Cost to Complete	Cost	Quotation
Direct Labor Hours	-	44470	-	44470	56060
Direct Labor Rate/Hour		4 16		4 16	4
Direct Labor Costs	-	184986		184986	230434
Overtime Premium	-	3131		3131	-
Burden	-	184484		184484	220885
Material & Other Costs Subcontract Costs	-	3260		3260	40604 -
Travel & Per Diem	25	738		738	-
Subtotal - Des. & Liaison	25	376599	-	376599	491923
PRODUCTION FLIGHT					
Direct Labor Hours	-	3009	-	3009	6307
Direct Labor Rate/Hour		6 61		6 61	6
Direct Labor Costs		19892		19892	37904
Overtime Premium		231		231	-
Burden		13989		13989	28447
Material & Other Costs		6078	-	6078	2280
Travel & Per Diem		391		391	-
Fuel & Oil		23524		23524	18655
Subtotal - Prod. Flight	-	64105	-	64105	87286
Direct Labor Hours					
Direct Labor Rate/Hour					
Direct Labor Costs					
Overtime Premium					
Burden					
Material & Other Costs					
Subcontract Costs					
Travel & Per Diem					
Subtotal					

PROJECT BUDGET STATUS REPORT

TITLE TEST TO TACTICAL MODIFICATION 35 F-106A/B Ads.

CONTRACT AF41(608)-11333 **TYPE** CPFF

W.O. NO. 26XXX SERIES **PERIOD ENDED** 30 NOVEMBER 1962

	Actual Expenditures			Indicated Total Cost at Completion		
	~~Current Month~~ Since 12-31-61.	Cumulative to Date	Cost to Complete	Cost	Quotation	(Over)/Under Quotation
	–	44470	–	44470	56060	11590
r		416		416	411	
	–	184986		184986	230434	45448
	–	3131		3131	–	< 3131 >
	–	184484		184484	220885	36401
s	–	3260		3260	40604	37344
					–	
	25	738		738	–	< 738 >
ison	25	376599	–	376599	491923	115324
	–	3009	–	3009	6307	3298
r		661		661	601	
		19892		19892	37904	18012
		231		231	–	< 231 >
		13989		13989	28447	14458
s		6078		6078	2280	< 3778 >
		391		391	–	< 391 >
		23524		23524	18655	< 4869 >
ht	–	64105	–	64105	87286	23181
r						
s						

Form No.95-0-14
GD/CONVAIR
PROJ.BUDGETS, Ext.2044
Issue # 25 Date

PROJECT BUDGET STATUS REPORT

TITLE TEST TO TACTICAL MODIFICATION 35 F-106A/B Aps.
CONTRACT AF41(608)-11333
TYPE
W.O. NO. 26XXX SERIES
PERIOD ENDED 30 NOVEMBER

	Actual Expenditures			Indicated Total Cos	
SERVICE PUBLICATIONS	~~Current~~ Since 12-31-61 ~~Month~~	Cumulative to Date	Cost to Complete	Cost	Quotatio
Direct Labor Hours	322	19 041	—	19 047	24 760
Direct Labor Rate/Hour	3 48	3 71		3 71	3
Direct Labor Costs	1 121	70 656		70 656	82 967
Overtime Premium	14	102		102	—
Burden	1 549	81 062		81 062	97 565
Material & Other Costs	656	60 800		60 800	34 031
Subcontract Costs					
Travel & Per Diem					
Subtotal- Service Pubs.	3 340	212 620	—	212 620	214 563
TOOL ENGINEERING					
Direct Labor Hours	—	34 070	—	34 070	36 326
Direct Labor Rate/Hour		3 37		3 37	3
Direct Labor Costs		114 841		114 841	122 537
Overtime Premium		67		67	32
Burden		110 971		110 971	126 610
Material & Other Costs					
Travel & Per Diem					
Subtotal- Tool Eng.	—	225 879	—	225 879	249 179
TOOL MANUFACTURING					
Direct Labor Hours	—	7 284	—	7 284	7 246
Direct Labor Rate/Hour		2 92		2 92	2
Direct Labor Costs		21 282	—	21 282	20 846
Overtime Premium		78	—	78	71
Burden	<1>	23 721	—	23 721	24 874
Material & Other Costs } Subcontract Costs		4 337	375	4 712	8 265
Travel & Per Diem					
Subtotal- Tool Mfg.	<1>	49 418	375	49 793	54 056

PROJECT BUDGET STATUS REPORT

TITLE TEST TO TACTICAL MODIFICATION 35 F-106A/B Aps.

CONTRACT AF41(608)-11333 TYPE CPFF

W.O. NO. 26XXX SERIES PERIOD ENDED 30 NOVEMBER 1962

	Actual Expenditures			Indicated Total Cost at Completion		
	~~Current Month~~ Since 12-31-61	Cumulative to Date	Cost to Complete	Cost	Quotation	(Over)/Under Quotation
	322	19047	—	19047	24760	5713
r	348	371		371	335	
	1121	70656		70656	82967	12311
	14	102		102	—	< 102 >
	1549	81062		81062	97565	16503
s	656	60800		60800	34031	< 26769 >
s.	3340	212620	—	212620	214563	1943
	—	34070	—	34070	36326	2256
r		337		337	337	
		114841		114841	122537	7696
		67		67	32	< 35 >
		110971		110971	126610	15639
	—	225879	—	225879	249179	23300
	—	7284	—	7284	7246	< 38 >
r		292		292	288	
		21282	—	21282	20846	< 436 >
		78	—	78	71	< 7 >
	< 1 >	23721	—	23721	24874	1153
s }		4337	375	4712	8265	3553
	< 1 >	49418	375	49793	54056	4263

Form No.95-0-14
GD/CONVAIR
PROJ.BUDGETS, Ext.2044
Issue #25 Date

PROJECT BUDGET STATUS REPORT

TITLE TEST TO TACTICAL MODIFICATION 35 F-106A/B Aps.
CONTRACT AF41(608)-11333 TYPE (
W.O. NO. 26XXX SERIES
PERIOD ENDED 30 NOVEMBER

	Actual Expenditures			Indicated Total Cos	
	~~Current~~ Since 12-31-61 ~~Month~~	Cumulative to Date	Cost to Complete	Cost	Quotatic
PRODUCTION FACTORY					
Direct Labor Hours	168	939 932	—	939 932	782 376
Direct Labor Rate/Hour	2 83	2 57		2 57	2
Direct Labor Costs	476	2 414 753		2 414 753	2 073 456
Overtime Premium	—	12 406		12 406	146
Burden	876	3 058 555		3 058 555	2 878 534
Material & Other Costs					
Subcontract Costs					
Travel & Per Diem	1 199	1 547		1 547	—
Subtotal - Prod. Factory	2 551	5 487 261	—	5 487 261	4 952 136
EXPERIMENTAL FACTORY		-			
Direct Labor Hours	6	7 427	—	7 427	40
Direct Labor Rate/Hour	3 00	2 88		2 88	3
Direct Labor Costs	18	21 403		21 403	127
Overtime Premium	—	186		186	—
Burden	31	23 805		23 805	146
Material & Other Costs					
Travel & Per Diem					
Subtotal - Exper. Factory	49	45 394	—	45 394	273
PALMDALE					
Direct Labor Hours	—	255 272	—	255 272	259 081
Direct Labor Rate/Hour		3 12		3 12	3
Direct Labor Costs		795 905		795 905	868 035
Overtime Premium		10 658		10 658	19
Burden		1 261 746		1 261 746	1 309 765
Material & Other Costs		—		—	—
Subcontract Costs		—		—	—
Travel & Per Diem		726		726	—
Subtotal - Palmdale	—	2 069 035	—	2 069 035	2 177 819

PROJECT BUDGET STATUS REPORT -

TITLE TEST TO TACTICAL MODIFICATION 35 F-106A/B Aps.

CONTRACT AF41(608)-11333 **TYPE** CPFF

W.O. NO. 26XXX SERIES **PERIOD ENDED** 30 NOVEMBER 1962

	Actual Expenditures			Indicated Total Cost at Completion		
	~~Current Month~~ Since 12-31-61	Cumulative to Date	Cost to Complete	Cost	Quotation	(Over)/Under Quotation
	168	939 932	-	939 932	182 376	< 157 556 >
our	2 83	2 57		2 57	2 65	
	476	2 414 753		2 414 753	2 073 456	< 341 297 >
	-	12 406		12 406	146	< 12 260 >
	876	3 058 555		3 058 555	2 878 534	< 180 021 >
ts						
	1 199	1 547		1 547	-	< 1 547 >
tory	2 551	5 487 261	-	5 487 261	4 952 136	< 535 125 >
	6	7 427	-	7 427	40	< 7 387 >
ur	3 00	2 88		2 88	3 18	
	18	21 403		21 403	127	< 21 276 >
	-	186		186	-	< 186 >
	31	23 805		23 805	146	< 23 659 >
ts						
tory	49	45 394	-	45 394	273	< 45 121 >
	-	255 272	-	255 272	259 081	3 809
ur		3 12		3 12	3 35	
		795 905		795 905	868 035	72 130
		10 658		10 658	19	< 10 639 >
		1 261 746		1 261 746	1 309 765	48 019
ts		-		-	-	-
		-		-	-	-
		726		726	-	< 726 >
	-	2 069 035	-	2 069 035	2 177 819	108 784

Form No.95-0-14
GD/CONVAIR
PROJ.BUDGETS, Ext.2044
Issue #25 Date

PROJECT BUDGET STATUS REPORT

TITLE TEST TO TACTICAL MODIFICATION 35 F-106A/B Aps.
CONTRACT AF41(608)-11333 TY
W.O. NO. 26XXX SERIES PERIOD ENDED 30 NOVEMB

	Actual Expenditures			Indicated Total C	
	~~Current~~ Since 12-31-61 ~~Month~~	Cumulative to Date	Cost to Complete	Cost	Quota
PLANT ENGINEERING					
Direct Labor Hours	–	7126	–	7126	142
Direct Labor Rate/Hour		290		290	
Direct Labor Costs		20658		20658	437
Overtime Premium		59		59	–
Burden		22990		22990	54
Material & Other Costs		1323		1323	49
Subcontract Costs					
Travel & Per Diem					
Subtotal - Plant Eng.	–	45030	–	45030	1037
INSPECTION					
Direct Labor Hours	163	111839	–	111839	942
Direct Labor Rate/Hour	287	282		282	
Direct Labor Costs	468	315817		315817	2791
Overtime Premium	–	2271		2271	
Burden	848	362252		362252	3468
Material & Other Costs					–
Travel & Per Diem	–	2010		2010	–
Subtotal - Inspection	1316	682350	–	682350	6259
Direct Labor Hours					
Direct Labor Rate/Hour					
Direct Labor Costs					
Overtime Premium					
Burden					
Material & Other Costs					
Subcontract Costs					
Travel & Per Diem					
Subtotal					

PROJECT BUDGET STATUS REPORT

E TEST TO TACTICAL MODIFICATION 35 F-106A/B Acs.

RACT AF41(608)-11333 TYPE CPFF

NO. 26XXX SERIES PERIOD ENDED 30 NOVEMBER 1962

Actual Expenditures			Indicated Total Cost at Completion		
~~Current~~ Since 12-31-61 ~~Month~~	Cumulative to Date	Cost to Complete	Cost	Quotation	(Over)/Under Quotation
—	7126 290	—	7126 290	14265 307	7139
	20658		20658	43796	23138
	59		59	—	< 59 >
	22990		22990	54921	31931
	1323		1323	4993	3670
—	45030	—	45030	103710	58680
163 287	111839 282	—	111839 282	94296 296	< 17543 >
468	315817		315817	279107	< 36710 >
—	2271		2271	17	< 2254 >
848	362252		362252	346840	< 15412 >
				—	
—	2010		2010	—	< 2010 >
1316	682350	—	682350	625964	< 56386 >

Form No.95-0-14-2
GD/CONVAIR
PROJ.BUDGETS, Ext.2044
Issue #25 Date

PROJECT BUDGET STATUS REPORT

TITLE TEST TO TACTICAL MODIFICATION 35 F-106A/B Aps.
CONTRACT AF41(608)-11333
TYPE C
W.O. NO. 26XXX SERIES
PERIOD ENDED 30 NOVEMBER 1

SHIPPING	Actual Expenditures Since 12-31-61	Actual Expenditures Cumulative to Date	Cost to Complete	Indicated Total Cost Cost	Indicated Total Cost Quotation
Direct Labor Hours	1280	11451	20	11471	4560
Direct Labor Rate/Hour	253	245	265	245	250
Direct Labor Costs	3258	28058	53	28111	11406
Overtime Premium	—	—	—	—	—
Burden	6672	39336	104	39440	16613
Material & Other Costs	910	6242	14	6256	3272
Subtotal - Shipping	10820	73636	171	73807	31291

PROJECT BUDGET STATUS REPORT

TITLE TEST TO TACTICAL MODIFICATION 35 F-106A/B Aps.

CONTRACT AF41(608)-11333 **TYPE** CPFF

W.O. NO. 26XXX SERIES **PERIOD ENDED** 30 NOVEMBER 1962

	Actual Expenditures			Indicated Total Cost at Completion		
	Since 12-31-61	Cumulative to Date	Cost to Complete	Cost	Quotation	(Over)/Under Quotation
	1280	11451	20	11471	4560	< 6911 >
ur	253	245	265	245	250	
	3238	28058	53	28111	11406	< 16705 >
	—	—	—	—	—	—
	6672	39336	104	39440	16613	< 22827 >
ts	910	6242	14	6256	3272	< 2984 >
	10820	73636	171	73807	31291	< 42516 >

Form No.95-0-14-1

PROJECT BUDGET STATUS REPORT

GD/CONVAIR - TITLE TEST TO TACTICAL MODIFICATION 35 F-106A/B Aps.

PROJ.BUDGETS, Ext.2044 CONTRACT AF41(608)-11333 TYPE CP

Issue # 25 Date W.O. NO. 26XXX SERIES PERIOD ENDED 30 NOVEMBER 1

	Actual Expenditures		Cost to	Indicated	Total Cost
	~~Current~~ Since 12-31-61 ~~Month~~	Cumulative to Date	Complete	Cost	Quotation
MATERIAL DEPARTMENT					
Prod. Mat. & Purch. Parts	122284	4155732	1250	4756982	3837335
Dev. Test. & Expr. Mat.	27965	36584	–	36584	–
Excess Usage	<665>	67116	–	67116	–
Surplus Material Costs }	<138145>	167547	–	167547	–
Obsolescence Costs }					
Rework Costs	5393	51709	–	51709	175258
Vendor Program Costs					
Cancellation Costs	8972	17659	–	17659	15464
Production Subcontract	9107	4527653	13337	4540990	6179646
Subtotal-Mat. & Subcontr.	34911	9624000	14587	9638587	10207703
OTHER COSTS					
Other Direct Costs	<14989>	<5820>	–	<5820>	235810
Subtotal- Other Costs	<14989>	<5820>	–	<5820>	235810
TOTAL DIVISION COST	38022	18949507	15133	18964640	19431713
General Office Burden	175	369868	2	369870	232978
TOTAL PROJECT COST	38197	19319375	15135	19334510	19664691
Sales Income				20528019	20858200
Profit or (Loss)				1193509	1193509
Percent Profit on Cost				6.17	6.07
Allocation Hours	–	3518	–	3518	–
Total Direct Labor Hours	1939	1444445	20	1444465	1285317
Included in Total Costs:					
Other Div. G.O. Burden					

GENERAL DYNAMICS/CONVAIR
CVR 43-0-13

17 December 1962

RECEIVED
DEC 19 1962
PROJECT ANALYSIS SECTION

DATE RECEIVED
DEC 18 1962
A. L. HENDRICKS

INDICATED COST REPORT CONTRACT AF41(608)11333 AS OF 30 NOVEMBER 1962 - MANUFACTURING MATERIAL (EXCLUDES SPARES EXCEPT AS NOTED)

Cost Category	Accumulated Costs Thru 11/30/62	Indicated Cost To Complete	Indicated Cost 11/30/62	Final Budget 7/31/61
Purchased Parts & Raw Mat'l. Incl. Mfg. Usage Variance	$4,822,848	$1,250	$4,824,098	$3,729,707
Surplus	165,994	-0-	165,994	-0-
Obsolete	1,553	-0-	1,553	-0-
Rework	51,709	-0-	51,709	170,000
Subcontracted Cost - San Diego	2,162,410	-0-	2,162,410	2,562,198
- Fort Worth	2,365,243	13,337	2,378,580	3,594,178
Total Mfg. Material & S/C Costs	$9,569,757	$14,587	$9,584,344	$10,056,083
Program & Experimental Costs				
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ -0-	$ -0-	$ -0-	$ -0-
Cancellation Costs	17,659	-0-	17,659	15,000
ev. Test & Experimental Material	36,584	-0-	36,584	-0-
perimental Subcontract	-0-	-0-	-0-	-0-
Total Program & Experimental Costs	$ 54,243	-0-	$ 54,243	$ 15,000
GRAND TOTAL	$9,624,000	$14,587	$9,638,587	$10,071,083

NOTES: Indicated cost and budget cover the modification of thirty-five (35) airplanes.

Cost to Complete represents:

Purch. Parts & Raw Material
Open PO 702710 $1,249.57 Hughes Aircraft Company.

Fort Worth Cost to Complete is based on 11/29/62 TWX received from R. G. Smith, Fort Worth Contracts department which shows total indicated cost of $2,378,580.

epared by: D M Parker
D. M. Parker

Approved by: J Richman
J. L. Richman
Chief of Material Costs & Budgets

GENERAL DYNAMICS/CONVAIR
CVR 43-0-13

RECEIVED
MAY 1962
PROJECT ANALYSIS
SECTION

4 May 1962

DATE RECEIVED
MAY 8 - 1962
A. L. HENDRICKS

INDICATED COST REPORT CONTRACT AF33(600)11533
AS OF 31 MARCH 1962 **- MANUFACTURING MATERIAL**
(EXCLUDES SPARES EXCEPT AS NOTED)

Cost Category	Accumulated Costs Thru 3-31-62	Indicated Cost To Complete	Indicated Cost 3-31-62	Budget 7-31-61
Purchased Parts & Raw Material Including Mfg. Usage Variance	$ 4,703,482	$ 11,208	$ 4,714,690	$ 3,729,707
Surplus and Obsolete	290,693	59,307	350,000	-0-
Rework	48,681	4,319	53,000	170,000
Subcontracted Cost - San Diego	2,153,221	81,779	2,235,000	2,562,198
- Fort Worth	2,364,150	-0-	2,364,150	3,594,178
Total Mfg. Material & S/C Costs	$ 9,560,227	$156,613	$ 9,716,840	$10,056,083
Program & Experimental Costs				
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ -0-	$ -0-	$ -0-	$ -0-
Cancellation Costs	14,124	3,535	17,659	15,000
Dev. Test & Experimental Material	36,584	-0-	36,584	-0-
Experimental Subcontract	-0-	-0-	-0-	-0-
Total Program & Experimental Costs	$ 50,708	$ 3,535	$ 54,243	$ 15,000
GRAND TOTAL	$ 9,610,935	$160,148	$ 9,771,083	$10,071,083

NOTES: Indicated cost and budget has been established to cover the modification of thirty-five (35) airplanes.

The underrun to budget is due, primarily, to a reduction in Fort Worth Indicated Costs. Some of Fort Worth's reasons for the underrun are as follows:

1. Reduced direct labor and overhead rates.
2. Less canopy modification task than originally anticipated.
3. Improved factory performance (Assembly Area).
4. Reduced Tool Engineering task because of simplification of Operation Inspection Logs.
5. Less Tool Maintenance than anticipated.
6. Lower cost of Material and Outside Production parts than originally anticipated.

Prepared by: Doris Parker

Approved by: for
G. W. Zahrte
Procurement Manager

GENERAL DYNAMICS/CONVAIR
CVR 43-0-13

RECEIVED
MAY 9 1962

4 May 1962

DATE
RECEIVED
MAY 8 - 1962
A. L. HENDRICKS

INDICATED COST REPORT CONTRACT AF33(600)11383 AS OF 31 MARCH 1962 - MANUFACTURING MATERIAL (EXCLUDES SPARES EXCEPT AS NOTED)

COST ANALYSIS SECTION

Cost Category	**Accumulated Costs Thru 3-31-62**	**Indicated Cost To Complete**	**Indicated Cost 3-31-62**	**Budget 7-31-61**
Purchased Parts & Raw Material Including Mfg. Usage Variance	$ 4,703,482	$ 11,208	$ 4,714,690	$ 3,729,707
Surplus and Obsolete	290,693	59,307	350,000	-0-
Rework	48,681	4,319	53,000	170,000
Subcontracted Cost - San Diego	2,153,221	81,779	2,235,000	2,562,198
- Fort Worth	2,364,150	-0-	2,364,150	3,594,178
Total Mfg. Material & S/C Costs	$ 9,560,227	$156,613	$ 9,716,840	$10,056,083
Program & Experimental Costs				
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ -0-	$ -0-	$ -0-	$ -0-
Cancellation Costs	14,124	3,535	17,659	15,000
Dev. Test & Experimental Material	36,584	-0-	36,584	-0-
Experimental Subcontract	-0-	-0-	-0-	-0-
Total Program & Experimental Costs	$ 50,708	$ 3,535	$ 54,243	$ 15,000
GRAND TOTAL	$ 9,610,935	$160,148	$ 9,771,083	$10,071,083

NOTES: Indicated cost and budget has been established to cover the modification of thirty-five (35) airplanes.

The underrun to budget is due, primarily, to a reduction in Fort Worth Indicated Costs. Some of Fort Worth's reasons for the underrun are as follows:

1. Reduced direct labor and overhead rates.
2. Less canopy modification task than originally anticipated.
3. Improved factory performance (Assembly Area).
4. Reduced Tool Engineering task because of simplification of Operation Inspection Logs.
5. Less Tool Maintenance than anticipated.
6. Lower cost of Material and Outside Production parts than originally anticipated.

Prepared by: Doris Parker

Approved by: for G. W. Zahrte
Procurement Manager

Contract AF 41(608)-11333 Test-to-Tactical Mod.

CPFF mod. contract 35 airplanes.
Will be completed first week in August
with delivery of final airplane.

Suggest publication of final detail report
and summary entry as of 31 August 1961.

Budget report master prepared for July.

Two outstanding work requests, #20 and
#21 remain to be entered in quotation.
no change → #20 needs funding authorization OK
In quote 8-31-61 } #21 needs funding authorization
and sales order. OK
Ⓡ

Indirected cost folder has labor, overtime,
and burden work-sheets. Indirected cost
forms should be coming in from the
departments.

Don Stewart is Contracts man Ext 1444

Note: SO 1089-1-38 8/23/61 covers Partial
closing of contract Work orders.

(B) Work Sheet made up for items of Cost not obligated by SA'S or Work Request. Should the quotation Cost be adjusted? (See work sheet & reconcilement for items) — Quotation cost adjusted 8-31-61 <$151,799>

② Administrative Notice #1 Dated 8-7-61 Rec'd 8-30-61 deobligating $200,000 from committed funds. (Filed in Contract folder) Note – no entry made to Quotation Cost or fee (B)

GENERAL DYNAMICS/CONVAIR 31 January 1962

MODEL 8 CONTRACT AF41(608)11333
ANALYSIS OF COST TO COMPLETE AS OF 31 DECEMBER 1961
MANUFACTURING MATERIAL
(EXCLUDES SPARES EXCEPT AS NOTED)

Cost Category	Accumulated Costs Thru 12/31/61	Indicated Cost To Complete	Indicated Cost 12/31/61	Budget 7-31-61
Purchased Parts & Raw Material Including Mfg. Usage Variance	$ 4,701,229	$ 33,295	$ 4,734,524	$ 3,729,707
Surplus and Obsolete	305,692	44,308	350,000	-0-
Rework	46,316	13,684	60,000	170,000
Subcontracted Cost - San Diego	2,153,270	81,730	2,235,000	2,562,198
- Fort Worth	2,365,276	-0-	2,365,276	3,594,178
Total Mfg. Material & S/C Costs	$ 9,571,783	$ 173,017	$ 9,744,800	$10,056,083
Program & Experimental Costs				
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ -0-	$ -0-	-0-	-0-
Cancellation Costs	8,687	8,977	17,664	15,000
Dev. Test & Experimental Material	8,619	-0-	8,619	-0-
Experimental Subcontract	-0-	-0-	-0-	-0-
Total Program & Experimental Costs	$ 17,306	$ 8,977	$ 26,283	$ 15,000
GRAND TOTAL	$ 9,589,089	$ 181,994	$ 9,771,083	$10,071,083

RECEIVED
ESTIMATING DEPT.
FEB 2- 1962
AM PM
7,8,9,10,11,12,1,2,3,4,5,6

NOTES: Indicated cost and budget has been established to cover the modification of thirty-five (35) airplanes.

The underrun to budget is due, primarily, to a reduction in Fort Worth Indicated Costs. Some of Fort Worth's reasons for the underrun are as follows:

1. Reduced direct labor and overhead rates.
2. Less canopy modification task than originally anticipated.
3. Improved factory performance (Assembly Area).
4. Reduced Tool Engineering task because of simplification of Operation Inspection Logs.
5. Less Tool Maintenance than anticipated.
6. Lower cost of Material and Outside Production parts than originally anticipated.

Increase in total Indicated Cost from previous report is due to a correction in purchased parts and raw material charges which resulted from audit activity.

Prepared by: D. M. Parker

Approved by: for C. M. Gauss, Jr.
Material Cost Manager

REVISIONS - ACTIVE WORK ORDER LIST

DATE 9 January 1962

To: **HOLDERS OF ACTIVE WORK ORDER LISTS:** - MODEL 8 (F-106)- (Code 1)

Attached are revisions to the Active Work Order List. Please remove the applicable pages from your list and replace with the following:

			Work Orders Affected	
Beginning W.O. No.	**Ending W.O. No.**	**Revisions**	**New Numbers**	**Deletions**

This is a complete re-issue of the Model 8, F-106 work orders including the series from 26000 thru 26999 inclusive. Please destroy all the work order notices and active lists of the 26xxx series and replace with the attached list dated 9 January 1962.

Work Order Notice Numbers Incorporated into above pages:

Destroy Copies of Work Order Notices issued during current month if such notices have been included in the revisions shown above.

John Joyce

Cost Accounting Department

CONVAIR-SD-3137-1

FORM 3169-B

CONVAIR—SAN DIEGO

ACTIVE WORK ORDER LIST

Project MODEL 8

Contract AF41(608)11333

Work in Process Account 136

<table>
<tr><th>WORK ORDER NUMBER</th><th>RESPONSIBILITY (All 1-E)</th><th>DESCRIPTION</th></tr>
<tr><td>26039</td><td>Shipping</td><td>Shipping - Cost of shipping material to Vendors and Air Force Facilities.</td></tr>
<tr><td>26049</td><td>Inspection</td><td>Production Inspection - Inspection costs as follows:
a) Receiving Inspection labor
b) Inspection labor on the production line
c) Inspection labor performed at outside vendors.
d) Assist labor to inspection in accordance with SP 6-8
e) Inspection material costs of x-ray film.

Note: Use W.O. 26080 for functional checkout inspection of parts removed from aircraft in "Disassemble Phase" of Program.</td></tr>
<tr><td>26063</td><td></td><td>Cost of IR'd material delivered to GFP. This material will be serviceable and/or repairable and have assigned an Air Force Stock number.</td></tr>
<tr><td>26067</td><td>Factory</td><td>Obsolete Material - Cost of materials, sent to Reclamation Yard, which had been procured for requirements now rendered obsolete due to Engineering changes, ie., E.C.P.'s, A.C.A.'s, C.O.R.'s. All requisitions must bear the A.C.A., etc. number on the face of the requisition in the Sub-Order block.</td></tr>
<tr><td>26068</td><td>Factory</td><td>Surplus Material - Cost of materials, sent to Reclamation Yard, which are surplus to requirements for reasons other than identifiable obsolescent factors.</td></tr>
<tr><td>26069</td><td></td><td>Vendor cancellation costs due to engineering or other requirement changes</td></tr>
<tr><td>26300</td><td></td><td>CAP Inventory Material - Cost of raw material and purchased parts procured for and received into CAP inventory. These items and their costs will be segregated by the following means of identification:
<table>
<tr><th rowspan="2">Items of Material</th><th rowspan="2">Synthetic Dept. or Material Group</th><th colspan="3">Accounting Distribution</th></tr>
<tr><th>W.O.</th><th>Acct. No.</th><th>S/A Dept.</th></tr>
<tr><td>Raw Materials</td><td>364</td><td>26300</td><td>6</td><td>5 364</td></tr>
<tr><td>Pur. Parts</td><td>391</td><td>26300</td><td>6</td><td>5 391</td></tr>
</table></td></tr>
<tr><td>26344</td><td>CAP Inven.</td><td>CAP In-plant Loaned - Cost of CAP Inventory Material loaned to In-Plant Departments.</td></tr>
<tr><td>26346</td><td>CAP Inven.</td><td>CAP In-Plant Repair or Rework - Cost of CAP Inventory material sent to In-Plant Depts. for repair or rework.</td></tr>
</table>

Issue Date 9 January 1962

FORM 3169-B

CONVAIR—SAN DIEGO

ACTIVE WORK ORDER LIST

Project Model 8

Contract AF41(608)-11333

Work in Process Account 136

WORK ORDER NUMBER	RESPONSIBILITY (All 1-E)	DESCRIPTION
26347	CAP Inven.	CAP Vendor Repair or Rework - Cost of CAP Inventory material sent to Vendors for repair or rework.
26501	Service Pub.	Service Publications - Labor and material to revise Air Force Technical Order Manuals and Parts Catalogue illustrations.

Issue Date 9 January 1962

-12061

Contract AF 41(608)-12061   F-102 Tool Storage
Expired 6-30-61 CPFF tool storage contract

Complete and final report issued as of 6-30-61.

Check AWO #553 for any labor charges incurred after 6-30-61. These should be reversed out and charged to AWO #300. AWO #300 is assigned to the risk sales order covering tool storage subsequent to 6-30-61 *

* Note Risk SO 1101-1-9 was revised 8-7-61 increasing amount of maximum expenditure from $11,500 to $15,500 with time limit of 9-1-61

New Contract Rec'd
13704

13704

GENERAL DYNAMICS/CONVAIR

Date: 2 November 1961

To:
E. H. Demarus
H. A. Smith
W. J. Martin
J. J. Jedka

From: R. D. Evans

Subject: Contract AF41(608)-13704, Tool Storage and Disposition - Authorized Budget

Enclosure: (A) Authorized Budget

1. The above enclosure details authorized budget for the subject contract as of 31 October 1961.

2. Please provide Project Analysis, Estimating Department, with indicated cost at completion data on a monthly basis by the fifth working day following the close of the month.

3. Cost Accounting is requested to provide monthly statements of accumulated cost.

R. D. Evans

R. D. Evans
Budget Supervisor
Estimating Department

RDE:LRK:bp

cc:
R. L. Bolick
L. I. Fredricksen
R. H. Williams
R. H. Knapp

GENERAL DYNAMICS/CONVAIR ENCLOSURE (A)

AUTHORIZED BUDGET

TASK: Storage, Preservation and Preventative Maintenance, and Disposition of F-102 Spares Tools

CONTRACT: AF41(608)-13704

SALES ORDER: 1134-1-1, 29 August 1961

WORK ORDER: 300 Tool Preservation, 321 Tool Disposition

	BUDGET		
	W. O. 300	W. O. 321	Total
TOOL ENGINEERING			
Direct Labor Hours	5,754	3,077	8,831
Direct Labor Cost	$ 16,686	$ 8,923	$ 25,609
Burden	22,153	11,846	33,999
Subtotal	$ 38,839	$ 20,769	$ 59,608
PLANT ENGINEERING			
Direct Labor Hours	6,233	920	7,153
Direct Labor Cost	$ 18,076	$ 2,668	$ 20,744
Burden	23,997	3,542	27,539
Material	4,800	-	4,800
Subtotal	$ 46,873	$ 6,210	$ 53,083
INSPECTION			
Direct Labor Hours	300	-	300
Direct Labor Cost	$ 900	-	$ 900
Burden	1,155		1,155
Subtotal	$ 2,055	-	$ 2,055
TOTAL DIVISION COST	$ 87,767	$ 26,979	$114,746
G. O. Burden	3,688	1,203	4,891
TOTAL PROJECT COST	$ 91,455	$ 28,182	$119,637

Project Analysis Section
Estimating Dept. #95-0
11-2-61

13704

Contract AF 41 (608)—1[illegible] F-112 Tool Storage
3rd CPFF tool storage contract expected momentarily from SAAMA to cover period 7-1-61 thru 6-30-62.

O.H. Patterson, Contracts Ext. 1302 will keep you advised.

Rush: sales order 1101-1-9 covers current activity not to exceed $11,500. Note - Revised 8-9-61 to $15,500 until 9-1-61 CB
~~Issue budget report for July based on proposed costs of $116,531 + 6% fee. Revise subsequent reports when contract definitized.~~

Data filed in - 12061 folder (copied contract). Set up separate folder when documents are complete.

Contract will be straight fixed-price for $101,000 including profit. Suggest set profit up at 10% Say $91,818 cost and $9,182 profit. Get estimate to fit $91,818 cost figure from Lew Grant. Budget as soon as possible.

[illegible] drawer

R. D. Evans

GENERAL DYNAMICS/CONVAIR

RECEIVED
AUG 30 1961
PROJECT ANALYSIS SECTION

SALES ORDER

Sold To:	San Antonio Air Materiel Area Kelly Air Force Base Texas	Date:	29 August 1961
		Contract:	AF41(608)-13704
		S. O. No:	1134-1-1
		W. O. No:	300 (Tool Preservation) 321 (Tool Disposition)

Copy

STORAGE, PRESERVATION AND PREVENTATIVE MAINTENANCE, AND DISPOSITION OF F-102 SPARES TOOLS

1. This Sales Order cancels and supersedes Risk Sales Order 1101-1-9 dated 5 July 1961, as revised 7 August 1961.

2. Fixed Price SAAMA Contract AF41(608)-13704 has been received and provides for the continued storage and preservation of F-102 spares tools, and for the disposition of approximately 10,906 F-102 spares tools.

3. The term of this Contract is from 1 July 1961 through 30 June 1962.

4. Item 1 of the Contract furnishes $100,600 ($91,455 in costs and $9,145 in profit) for the continued storage and preservation of F-102 spares tools. The PR or MIPR Number and Accounting Classification of this Item 1 is SA-1-01B-16849 and 16849-1, -2, and -3 5723400 263-1046 P432.4 S504300 2590 CSN: FY 62 P432.4. All costs in connection with this task will be charged to Work Order 300.

5. Item 2 of the Contract furnishes $31,000 ($28,182 in costs and $2,818 in profit) to cover disposition of approximately 10,906 F-102 spares tools declared surplus to further spares requirements by SAAMA. A list of the surplus tools is attached to the Contract as Exhibit "A". The PR or MIPR Number and Accounting Classification for this Item 2 is 5723400 263-1066 P432.7 S504300 2590 CSN: FY 62 P432.7. All costs in connection with this task will be charged to Work Order 321.

6. Continued inspection, storage and preservation of the remaining F-102 spares tools are to be in accordance with SAAMA Specification MIL-T-0000A (USAF), dated 10 January 1961, Amendment 1 thereto dated 8 May 1961, and Amendment 1 (A) dated 3 July 1961, attached to and made a part of the Contract.

7. Clause 4 of the Contract provides: Consideration. Upon completion of each three-months of the services described above to the satisfaction of the Contracting Office, the Government will pay the Contractor upon receipt of properly certified invoices or vouchers, the sum of $32,900 as one quarter of the payment for the services to be furnished hereunder.

8. Other Clauses of the Contract are listed as follows:

Clause 5. Inspection.

Clause 6. Waiver of Lien.

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JECT ANALYS
SECTION

Sold To: SAAMA

Date: 29 August 1961

S. O. No: 1134-1-1

Clause 7. Termination for Convenience of the Government.

Clause 8. Disposition of Property.

Clause 9. Segregation of Property.

Clause 10. Deliveries.

Clause 11. Changes.

Clause 12. Convict Labor.

Clause 13. Eight Hour Law of 1912 - Overtime Compensation (Jan. 1958).

Clause 14. Nondiscrimination in Employment.

Clause 15. Officials Not To Benefit.

Clause 16. Covenant Against Contingent Fees.

Clause 17. Disputes.

Clause 18. Liability for Government-Owned Property.

This Clause, in brief, provides that "The Contractor assumes the risk of, and shall be responsible for, any loss or damage, resulting from lack of reasonable care on the part of the Contractor, to property of the Government in the possession or control of the Contractor in connection with this Contract..."

Clause 19. Federal, State and Local Taxes.

Clause 20. Assignment of Claims.

Clause 21. Notice to the Government of Labor Disputes.

Clause 22. Furnishing of Materials or Supplies by the Government at its Option.

Clause 23. Inspection and Audit.

Clause 24. Default.

Clause 25. Renegotiation.

RECEIVED
AUG 30 1961
OJECT ANALYSI
SECTION

SALES ORDER Page 3

Sold To: SAAMA

Date: 29 August 1961

S. O. No: 1134-1-1

Clause 26. Gratuities.

Clause 27. Definitions.

Clause 28. Use of Government Facilities on a No-Charge Basis.

Clause 29. Weighing and Marking.

Clause 30. Examination of Records.

Clause 31. Utilization of Small Business Concerns.

Clause 32. Subcontracts for Work or Services.

Clause 33. Extras.

Clause 34. Buy American Act.

Clause 35. Government Property.
This Clause provides that "The Contractor shall comply with the provisions of Appendix B, manual for Control of Government Property in Possession of Contractors, of the Armed Services Procurement Regulations."

Clause 36. Approval of Contract.

9. Affected Departments (Tooling, Maintenance, Transportation, and Inspection) are authorized to proceed with the above tasks. Copies of this Contract will be distributed to all affected parties as soon as copies are available.

OHP:am

O. W. Patterson
F. S. Chambers
Manager of Contracts

GENERAL DYNAMICS/CONVAIR

29 August 1961

Copy

To: R. D. Evans
From: O. H. Patterson
Subject: Contract AF41(608)-13704
Item 1 - Preservation of F-102 Spares Tools
Work Order 300

RECEIVED
AUG 31 1961
PROJECT ANALYS
SECTION

1. The subject Contract has just been received from SAAMA and provides as Item 1 thereof $91,455 in costs (plus $9,145 for profit) for the continued storage and preservation of approximately 18,000 F-102 spares tools for the fiscal year 1962, 1 July 1961 through 30 June 1962. This is a straight Fixed Price Contract; only $91,455 will be available for the task; there can be no overrun.. All costs under this Item 1 of the Contract are to be charged to Work Order 300.

2. Will you please determine the number of labor hours available to the following Departments, based upon the applicable direct labor and burden rates for the period above noted. The $91,455 should be apportioned, in terms of dollars and hours, as follows:

A. $4,800 to Plant Engineering for cost of necessary preservation materials.
B. 300 direct labor hours to Inspection Department.
C. 52% of remaining available hours to Plant Engineering Department

and

48% of the remaining available hours to Tooling Department.

O.H. Patterson
O. H. Patterson
Contract Administrator

OHP:em
cc: R. L. Bolick
R. H. Williams
L. G. Lawson
A. H. Lazarus
Y. Z. Morris
J. H. Earl
O. H. Patterson

GENERAL DYNAMICS/CONVAIR

Copy

29 August 1961

To R. D. Evans

From O. H. Patterson

Subject Contract AF41(608)-13704
Item 2 - Disposition of F-102 Spares Tooling
Work Order 321

RECEIVED
AUG 31 1961
ROJECT ANAL
SECTION

1. The subject Contract has just been received from SAAMA and provides as Item 2 thereof $28,182 in costs (plus $2,818 for profit) for the disposition of approximately 10,906 F-102 spares tools during the fiscal year 1962, 1 July 1961 through 30 June 1962. This is a straight Fixed Price Contract; only $28,182 will be available for this task. All costs under this Item 2 of the Contract are to be charged to Work Order 321.

2. Will you please determine the number of labor hours available to the following Departments, based upon the applicable direct labor and burden rates for the period above noted. It is suggested that Y. Z. Morris, Tool Control, Extension 1122, by contacted to determine the period of time during which these tools will actually be disposed of. The $28,182 should be apportioned in terms of hours as follows:

A. 77% of available labor hours to Tooling Department.
B. Remaining hours, 23%, to Plant Engineering Department.

O. H. Patterson
O. H. Patterson
Contract Administrator

OHP:om

cc: R. L. Bolick
R. H. Williams
Y. Z. Morris
J. H. Earl
O. H. Patterson

-14175

GENERAL DYNAMICS/CONVAIR

Date: 2 November 1961

To:
G. L. Peyton
E. H. Lazarus
J. B. Kunn
W. J. Martin
J. J. Jodka

From: R. D. Evans

Subject: Contract AF41(608)-14175, F-106 Weapons System Test Program - Authorized Budget

Enclosure: (A) Authorized Budget

1. The above enclosure details authorized budget for the subject contract as of 31 October 1961.

2. Please provide Project Analysis, Estimating Department, with indicated cost at completion data monthly by the fifth working day following the close of the month.

3. Cost Accounting is requested to provide monthly statements of accumulated cost.

4. The enclosed budget represents the amounts at which the subject contract is expected to be definitized. Until the contract is formalized expenditures are limited by letter contract to approximately 50% of the budgeted figures.

R. D. Evans
Budget Supervisor
Estimating Department

RDE:LEK:bp

cc:
R. L. Bolick
L. I. Fredrickson
C. L. Steel
R. H. Knapp

AUTHORIZED BUDGET

TASK: F-106 Weapons System Test Program

CONTRACT: AF41(608)-14175

SALES ORDER: 1133-1-1, Revised 25 September 1961

WORK ORDER: 316

	BUDGET
ENGINEERING DESIGN & TECH.	
Direct Labor Hours	9,220
Direct Labor Cost	$ 44,440
Overtime Premium	318
Burden	40,107
Material & Other	5,760
Travel & Per Diem	3,666
Subtotal	$ 94,291
HOLLOMAN	
Direct Labor Hours	5,544
Direct Labor Cost	$ 22,121
Overtime Premium	192
Burden	28,219
Material	2,772
Travel & Per Diem	1,668
Subtotal	$ 54,972
TOOL ENGINEERING	
Direct Labor Hours	80
Direct Labor Cost	$ 276
Overtime Premium	3
Burden	250
Subtotal	$ 529
EXPERIMENTAL FACTORY	
Direct Labor Hours	1,098
Direct Labor Cost	$ 2,913
Overtime Premium	29
Burden	3,155
Material & Other	938
Subtotal	$ 7,035

AUTHORIZED BUDGET

TASK: F-106 Weapons System Test Program

CONTRACT: AF41(608)-14175

SALES ORDER: 1133-1-1, Revised 25 September 1961

WORK ORDER: 316

	BUDGET
INSPECTION	
Direct Labor Hours	59
Direct Labor Cost	$ 173
Overtime Premium	1
Burden	185
Subtotal	$ 359
TOTAL DIVISION COST	$157,236
G. O. Burden	3,500
TOTAL PROJECT COST	$160,736

Project Analysis Section
Estimating Dept. #95-0
11-2-61

Contract AF 41(608)-14175 F-106 Weapons System Test Program

New CPFF letter contract from SAAMA which continues -40599 type activity.

Area estimate of $175,000 is basis of quotation. Letter contract limits AF liability to $87,500. Definitization negotiations expected in Sept.

Budget format prepared for initial report as of 31 July 1961.

Dick Waving preparing firm estimate. *

Ed Joos is Contracts man.

* Note: Firm estimate received from contracts
8-15-61 Total Est Cost $160,736.
1st Report should reflect the firm figures rather than area figures

R

-31174

R. D. Evans

RECEIVED

OCT 8 1962

PROJECT ANALYSIS SECTION

Ri 2-6541

073-

XYA233-
SCO FCD 15 10-4-62 408P

D H DIGGES

REURMSG 16 10-4-62

TOM GRANT DOES NOT HAVE 31174 & 33695 BACK FROM LEGAL. HE HOPES TO GET THEM NEXT WEEK AND WILL GIVE US ADVANCE COPIES.

THE ASD PRICING PEOPLE ARE NOW AIMING FOR THE 5 NOV DATE. GRANT SENT A TWX TO ELDRIDGE WHO SHOULD ADVISE YOU. INCIDENTIALLY, GEORGE BARKALOW WILL LEAD THE ASD SIDE

BOB WRIGHT
GD DAYTON

DATE RECEIVED
MAY 8 - 1962
A. L. HENDRICKS

GENERAL DYNAMICS/CONVAIR
CVR 43-0-34

4 May 1962

INDICATED COST REPORT CONTRACT AF33(600)31174
AS OF 31 MARCH 1962 - MANUFACTURING MATERIAL
(EXCLUDES SPARES EXCEPT AS NOTED)

RECEIVED
MAY 9 1962
PROJECT ANALYSIS SECTION

Cost Category	**Accumulated Costs Thru 3-31-62**	**Indicated Cost To Complete**	**Indicated Cost 3-31-62**
Purchased Parts & Raw Material Including Mfg. Usage Variance	$68,565,045	$ 10,429	$68,575,474
Surplus and Obsolete	11,679,048	-0-	11,679,048
Rework	1,488,228	-0-	1,488,228
Subcontracted Cost - San Diego	67,129,888	-0-	67,129,888
- Fort Worth	-0-	-0-	-0-
Total Mfg. Material & S/C Costs	$148,862,209	$ 10,429	$148,872,638
Program & Experimental Costs			
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ 3,926,457	$ 450	$ 3,926,907
Cancellation Costs	745,884	195,824	941,708
Dev. Test & Experimental Material	-0-	-0-	-0-
Experimental Subcontract	-0-	-0-	-0-
Total Program & Experimental Costs	$ 4,672,341	$196,274	$ 4,868,615
GRAND TOTAL	$153,534,550	$206,703	$153,741,253

Prepared by: ____________________

Approved by: ____________________
G. W. Zahrte
Procurement Manager

GENERAL DYNAMICS/CONVAIR
CVR 43-0-34

4 May 1962

DATE RECEIVED
MAY 8 - 1962
A. L. HENDRICKS

RECEIVED
MAY 9 1962
ANALYSIS SECTION

INDICATED COST REPORT CONTRACT AF33(600)31174
AS OF 31 MARCH 1962 - MANUFACTURING MATERIAL
(EXCLUDES SPARES EXCEPT AS NOTED)

Cost Category	Accumulated Costs Thru 3-31-62	Indicated Cost To Complete	Indicated Cost 3-31-62
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Rework	1,488,228	-0-	1,488,228
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- Fort Worth	-0-	-0-	-0-
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Total Program & Experimental Costs	$ 4,672,341	$196,274	$ 4,868,615
GRAND TOTAL	$153,534,550	$206,703	$153,741,253

Prepared by: ______________________

Approved by: Lehman
for G. W. Zahrte
Procurement Manager

GENERAL DYNAMICS/CONVAIR

STATUS OF SURPLUS AND OBSOLETE MATERIAL FOR CONTRACTS 31174 & 33695

The following listed figures represent an estimate of the net costs of Surplus and Obsolete Material on above Contracts:

As of 1 December 1961	31174 W.O.#18068	33695 W.O.#20068
Reserves Established	$ 11,648,600.00	$ 3,918,225.00
Actual S & O to Salvage	13,395,036.55	4,294,250.25
Declared S & O - not booked	3,993.39	4,136.25
On Inventory Records - not declared	-0-	-0-
TOTAL	$ 13,399,029.94	$ 4,298,386.50
Actual Receipts from Salvage Sales	1,717,127.38	465,774.40
Material on hand in Surplus	(43,374.24)	(6,633.98)
Receipt from mat. on hand, est. at 2%	867.48	132.68
Receipts from mat. est. to be rec. at 2%	79.86	82.72
TOTAL	$ 1,718,074.72	$ 465,989.80
Net Costs	11,680,955.22	3,832,396.70
Less Reserves	11,648,600.00	3,918,225.00
TOTAL	$ - 32,355.22	$ 85,828.30

Attachment 2

Contract AF 33(600)-31174 E/TF-102A (65)

Fixed-price incentive production contract.
Complete

Final negotiations suspended pending justification of S & O position.

No detail budget. Carried as a one-line item on summary report. Data recorded in summary book.

Current indicated and quotation figures match final negotiation brochure except for profit on taxes and interest expense.

When negotiations are settled, match airplane costs & profit for final summary report.

Harry Rogers & Bob Fetterly have details.

John Willing has minutes of negotiations so far.

-33695

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FEB 21 1963
JECT ANAL
SECTION

21 February 1963

D. E. Flanders

B. J. Wood

Disposition of Surplus Materials - F-102

In December 1962, Contract -33695 was charged with $59,400 for surplus material sent to Salvage. Included in the charge was $35,300 for 774 pieces of COUPL 185-41, Material No. 255738, which has been carried in Division Stores inventory since 1959.

The identity of this item to the F-102 Program was evidently lost in the conversion from "NCR" to the "705" Record System, when it became anonymously coded as contract 050 - "miscellaneous military contracts".

Unfortunately, the $59,400 charge in December did not come to our attention in time to include it in 1962 Cost of Sales for Contract -31174. It now has to be included as a loss in 1963, since all income for -31174 was booked in prior years.

Please advise us as soon as possible as to any additional surplus still on hand in Division Inventory which will be charged to completed contracts when sent to Salvage.

BJWood
B. J. WOOD, Supervisor
Cost Ledger & Analysis

BJW:vmi

cc: R. D. Evans
W. W. Hass
J. J. Jodka
J. L. Richman
H. E. Wall

GENERAL DYNAMICS/CONVAIR
CVR-43-0-35

4 May 1962

DATE RECEIVED
MAY 8 - 1962
A. L. HENDRICKS

INDICATED COST REPORT CONTRACT AF33(600)33695
AS OF 31 MARCH 1961 - MANUFACTURING MATERIAL
(EXCLUDES SPARES EXCEPT AS NOTED)

RECEIVED
MAY 9 1962
PROJECT ANALYSIS SECTION

Cost Category	Accumulated Costs Thru 3/31/62	Indicated Cost To Complete	Indicated Cost 3/31/62
Purchased Parts & Raw Material Including Mfg. Usage Variance	$12,473,986	$ 21,931	$12,495,917
Surplus and Obsolete	3,827,998	-0-	3,827,998
Rework	319,235	-0-	319,235
Subcontracted Cost - San Diego	15,679,667	-0-	15,679,667
- Fort Worth	-0-	-0-	-0-
Total Mfg. Material & S/C Costs	$32,300,886	$ 21,931	$32,322,817
Program & Experimental Costs			
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ 185,228	$ -0-	$ 185,228
Cancellation Costs	93,449	-0-	93,449
Dev. Test & Experimental Material	-0-	-0-	-0-
Experimental Subcontract	-0-	-0-	-0-
Total Program & Experimental Costs	$ 278,677	$ -0-	$ 278,677
GRAND TOTAL	$32,579,563	$ 21,931	$32,601,494

Prepared by:

Approved by:
for G. W. Zahrte
Procurement Manager

GENERAL DYNAMICS/CONVAIR
CVR-43-0-35

4 May 1962

DATE RECEIVED
MAY 8 - 1962
A. L. HENDRICKS

INDICATED COST REPORT CONTRACT AF33(600)33695 AS OF 31 MARCH 1961 - MANUFACTURING MATERIAL (EXCLUDES SPARES EXCEPT AS NOTED)

RECEIVED
MAY 9 1962
COST ANALYSIS SECTION

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Surplus and Obsolete	3,827,998	-0-	3,827,998
Rework	319,235	-0-	319,235
Subcontracted Cost - San Diego	15,679,667	-0-	15,679,667
- Fort Worth	-0-	-0-	-0-
Total Mfg. Material & S/C Costs	$32,300,886	$ 21,931	$32,322,817
Program & Experimental Costs			
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ 185,228	$ -0-	$ 185,228
Cancellation Costs	93,449	-0-	93,449
Dev. Test & Experimental Material	-0-	-0-	-0-
Experimental Subcontract	-0-	-0-	-0-
Total Program & Experimental Costs	$ 278,677	$ -0-	$ 278,677
GRAND TOTAL	$32,579,563	$ 21,931	$32,601,494

repared by:

Approved by:
for G. W. Zahrte
Procurement Manager

Contract AF 33(600)-33695 F-102 A

Fixed price incentive production contract.
Last F-102 contract.
Complete
Final negotiations suspended pending further progress on -31174 negotiations.

No detail budget. Carried as one-line item on summary report. Data recorded in summary book.

Current indicated and quotation figures match final negotiation brochure except for profit on taxes and interest expense.

When negotiations are settled, match airplane costs & profit for final summary report.

Harry Rogers & Bob Feltenly have details.

REVISIONS - ACTIVE WORK ORDER LIST

DATE 29 December 1961

To: HOLDERS OF ACTIVE WORK ORDER LISTS: - MODEL 8 (Code 1)

Attached are revisions to the Active Work Order List. Please remove the applicable pages from your list and replace with the following:

			Work Orders Affected	
Beginning W.O. No.	Ending W.O. No.	Revisions	New Numbers	Deletions

The attached Active Work Order list is a complete re-issue of the 20xxx work order series as of 29 December 1961. Please remove and destroy any pervious 20xxx work orders in your possession and replace with the attached list dated 29 December 1961.

Work Order Notice Numbers Incorporated into above pages:

Destroy Copies of Work Order Notices issued during current month if such notices have been included in the revisions shown above.

Cost Accounting Department

CONVAIR-SD-3137-1

FORM 3169-B

CONVAIR—SAN DIEGO

ACTIVE WORK ORDER LIST

Project MODEL 8

Contract AF33(600)33695

Work in Process Account 137

WORK ORDER NUMBER	RESPONSIBILITY	DESCRIPTION
20030 (1-E)	Factory	Costs of purchased parts scrapped as a result of damage during airframe assembly operations. Normal procedure is for the damaged parts to be returned to Division Stores on an "exchange basis" by the Production Dept. A review is made and if the part is not repairable, it is sent to salvage. This work order shall be used to send the scrapped part to salvage. The requisition accomplishing the transaction must reference the IR number. Material rejected by Receiving Inspection for which the Buyer's decision is "scrap at Convair expense," shall be requisitioned from stores and sent to salvage charged to this work order. The requisition accomplishing the transaction must reference the IR number.
20039 (1-E)	Factory	Other manufacturing costs, which are not considered detail, assembly, or installation costs, such as: a. Plant engineering assist on production area set-up required because of the nature of the work and the equipment required. b. Shipping costs c. Royalties, taxes and insurance d. Allocations: 1. Heat treating and anodizing 2. Rivet Manufacture 3. Freight e. Any and all other direct mfg. costs, not listed above, which are not detail, assembly, or installation costs.
20066 (4-T)	Factory	Vendor Program Costs - Costs required by a vendor in developing parts production for Convair. These costs include research & development, engineering planning, design, mfg. and testing of tools and any other cost required to the point of production run of parts. Convair may provide specifications to the vendor who develops prints, tools, etc., for production parts for Convair. This does not include spare parts. Purchasing Section of Material Dept. will be responsible for a segregating vendor program costs on P/O's.
20069 (1-E)	Factory	Vendor cancellation costs due to engineering or other requirement changes.
20470 (4-T)	Dept. Chrg.	Cost of Plant Clearance action involving disposition of F102A Government owned property.
20068 (1-E)	Factory	Costs of material procured as a result of requirements which bave become surplus or obsolete due to engineering or other requirement changes, and is now to be transferred to the Salvage Yard for final disposition.

Issue Date 29 December 1961

-33808

Contr 33808

WO 19xxx

Open Commit 12/31/62

WO	~~Dist~~		
19834	Dist 6	$50.00	(CSE)

R. D. Evans

GENERAL DYNAMICS/CONVAIR
CVR 43-0-10

19 October 1962

INDICATED COST REPORT CONTRACT AF33(600)33808 (MONTHLY) AS OF 30 SEPTEMBER 1962 - MANUFACTURING MATERIAL (EXCLUDES SPARES EXCEPT AS NOTED)

Cost Category	Accumulated Costs Thru 9-30-62	Indicated Cost To Complete	Indicated Cost 9-30-62	Final Budget 12-31-60
Purchased Parts & Raw Material including Mfg. Usage Variance	$17,603,396	$(6,855)	$17,596,541	$15,779,234
Surplus and Obsolete	1,203,972	63,628	1,267,600	813,208
Rework	857,184	-0-	857,184	229,872
Subcontracted Cost - San Diego	27,345,136	-0-	27,345,136	27,482,308
- Fort Worth	28,693,531	-0-	28,693,531	29,431,423
Total Mfg. Material & S/C Costs	$75,703,219	$ 56,773	$75,759,992	$73,736,045
Program & Experimental Costs				
Vendors: Eng., Tooling & Development for Purchased Parts & Subcontract	$ 2,430,495	-0-	$ 2,430,495	$ 2,830,033
Cancellation Costs	786,693	-0-	786,693	532,337
Dev. Test & Experimental Material	13,293	-0-	13,293	49,862
Experimental Subcontract	690	-0-	690	-0-
Total Program & Experimental Costs	$ 3,231,171	-0-	$ 3,231,171	$ 3,412,232
GRAND TOTAL	$78,934,390	$ 56,773	$78,991,163	$77,148,277

Prepared by: D. M. Parker
D. M. Parker

Approved by:
J. L. Richman
Chief of Material Costs & Budget

RECEIVED
OCT 24 1962
W. W. HASS

GENERAL DYNAMICS/CONVAIR
CVR 43-0-10

19 April 1962

DATE RECEIVED
APR 2 4 1962
A. L. HENDRICKS

RECEIVED
APR 24 1962
COST ANALYSIS SECTION

INDICATED COST REPORT CONTRACT AF33(600)33808 (Monthly)
AS OF 31 MARCH 1962 **- MANUFACTURING MATERIAL**
(EXCLUDES SPARES EXCEPT AS NOTED)

Cost Category	**Accumulated Costs Thru** 3-31-62	**Indicated Cost To Complete**	**Indicated Cost** 3-31-62	**Budget** 12-31-61
Purchased Parts & Raw Material Including Mfg. Usage Variance	$17,138,451	$102,124	$17,240,575	$15,779,234
Surplus and Obsolete	1,170,201	43,799	1,214,000	813,208
Rework	855,735	-0-	855,735	229,872
Subcontracted Cost - San Diego	27,345,106	-0-	27,345,106	27,482,308
- Fort Worth	28,693,473	-0-	28,693,473	29,431,423
Total Mfg. Material & S/C Costs	$75,202,966	$145,923	$75,348,889	$73,736,045
Program & Experimental Costs				
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ 2,430,024	$ 770	$ 2,430,794	$ 2,830,033
Cancellation Costs	786,693	-0-	786,693	532,337
Dev. Test & Experimental Material	12,653	-0-	12,653	49,862
Experimental Subcontract	690	-0-	690	-0-
Total Program & Experimental Costs	$ 3,230,060	$ 770	$ 3,230,830	$ 3,412,232
GRAND TOTAL	$78,433,026	$146,693	$78,579,719	$77,148,277

NOTES: Surplus and obsolete indicated cost includes cost for both production and spares.

Cancellation indicated costs reflect open and potential cancellation claims for production and spares material.

Purchased Parts and Raw Material - Indicated Cost is based on current information received from the Program Accountability section of Material Control which is in the process of auditing Model F-106 contracts.

Prepared by: Doris Parker

Approved by: for G. W. Zahrte
Procurement Manager

GENERAL DYNAMICS/CONVAIR
CVR 43-0-10

RECEIVED
APR 24 1962
PROJECT ANALYSIS
SECTION

19 April 1962

DATE
RECEIVED
APR 24 1962
A. L. HENDRICKS

INDICATED COST REPORT CONTRACT AF33(600)33808 (Monthly)
AS OF 31 MARCH 1962 **- MANUFACTURING MATERIAL**
(EXCLUDES SPARES EXCEPT AS NOTED)

Cost Category	Accumulated Costs Thru 3-31-62	Indicated Cost To Complete	Indicated Cost 3-31-62	Budget 12-31-61
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[illegible]**al. Program & Experimental Costs**	$ 3,230,060	$ 770	$ 3,230,830	$ 3,412,232
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Prepared by: Doris Parker

Approved by: for
G. W. Zahrte
Procurement Manager

GENERAL DYNAMICS/CONVAIR
CVR-43-0-10

9 February 1962

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OJECT ANALYSIS SECTION

INDICATED COST REPORT CONTRACT AF33(600)33808 (Monthly) AS OF 31 DECEMBER 1961 - MANUFACTURING MATERIAL (EXCLUDES SPARES EXCEPT AS NOTED)

Cost Category	Accumulated Costs Thru 12-31-61	Indicated Cost To Complete	Indicated Cost 12-31-61	Final Budget 12-31-61
Purchased Parts & Raw Material Including Mfg. Usage Variance	$16,978,789	$ 310,571	$17,289,360	$15,779,234
Surplus and Obsolete	1,183,865	180,135	1,364,000	813,208
Rework	854,671	-0-	854,671	229,872
Subcontracted Cost - San Diego	27,345,106	-0-	27,345,106	27,482,308
- Fort Worth	28,693,178	-0-	28,693,178	29,431,423
Total Mfg. Material & S/C Costs	$75,055,609	$ 490,706	$75,546,315	$73,736,045
Program & Experimental Costs				
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ 2,430,024	$ 770	$ 2,430,794	$ 2,830,033
Cancellation Costs	783,642	3,706	787,348	532,337
Dev. Test & Experimental Material	14,572	-0-	14,572	49,862
Experimental Subcontract	690	--0-	690	-0-
Total Program & Experimental Costs	$ 3,228,928	$ 4,476	$ 3,233,404	$ 3,412,232
GRAND TOTAL	$78,284,537	$ 495,182	$78,779,719	$77,148,277

NOTES: Surplus and obsolete indicated cost includes cost for both production and spares.

Cancellation indicated costs reflect open and potential cancellation claims for production and spares material.

Purchased Parts and Raw Material - Indicated Cost is based on current information received from the program Accountability section of Material Control which is in the process of auditing Model F-106 contracts.

Prepared by: Doris M. Parker

Approved by:
for C. M. Gauss, Jr.
Material Costs, Contracts & Services
Manager

GENERAL DYNAMICS/CONVAIR 15 December 1961

MODEL 8 CONTRACT AF33(600)33808
ANALYSIS OF COST TO COMPLETE AS OF 30 NOVEMBER 1961
MANUFACTURING MATERIAL
(EXCLUDES SPARES EXCEPT AS NOTED)

Cost Category	Accumulated Costs Thru 11-30-61	Indicated Cost To Complete	Indicated Cost 11-30-61	Final Budget 12/31/61
Purchased Parts & Raw Material Including Mfg. Usage Variance	$16,789,497	$ 500,000	$17,289,497	$15,779,234
Surplus and Obsolete	1,182,392	181,608	1,364,000	813,208
Rework	854,463	-0-	854,463	229,872
Subcontracted Cost - San Diego	27,345,103	-0-	27,345,103	27,482,308
- Fort Worth	28,693,238	-0-	28,693,238	29,431,423
Total Mfg. Material & S/C Costs	$74,864,693	$ 681,608	$75,546,301	$73,736,045
Program & Experimental Costs				
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ 2,429,468	$ 1,326	$ 2,430,794	$ 2,830,033
Cancellation Costs	783,642	3,706	787,348	532,337
Dev. Test & Experimental Material	14,586	-0-	14,586	49,862
Experimental Subcontract	690	-0-	690	-0-
Total Program & Experimental Costs	$ 3,228,386	$ 5,032	$ 3,233,418	$ 3,412,232
GRAND TOTAL	$78,093,079	$ 686,640	$78,779,719	$77,148,277

NOTES: Surplus and obsolete indicated cost includes cost for both production and spares.

Cancellation indicated costs reflect open and potential cancellation claims for production and spares material.

Purchased Parts and Raw Material - Increase in Indicated Cost of $500,000 is based on current information received from the Program Accountability section of Material Control which is in the process of auditing Model F-106 contracts. The forecasted increase to this contract is due mainly to transfers from Contract AF33(600)30169.

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Prepared by: D. M. Parker

Approved by: Jr.
C. M. Gauss, Jr.
Material Cost Manager

GENERAL DYNAMICS/CONVAIR

STATUS OF SURPLUS AND OBSOLETE MATERIAL FOR CONTRACTS 33808 & 34814

The following listed figures represent an estimate of the net costs of Surplus and Obsolete Material on above Contracts:

As of 1 December 1961	33808 W.O.#19068	34814 W.O.#21068
Reserves Established	$ 1,364,000.00	$ 448,060.00
Actual S & O to Salvage	1,278,196.11	381,239.80
Declared S & O - not booked	9,981.66	25,385.75
Anticipated Surplus upon completion of Contract	75,822.23	41,434.45
TOTAL	$ 1,364,000.00	$ 448,060.00
Actual Receipts from Salvage Sales	$ 95,803.65	$ 15,514.02
Material on hand in Surplus	(261,243.80)	(88,410.14)
Receipts from material on hand at 3%	7,840.29	2,652.30
Receipts from mat. est. to be rec. at 3%	2,574.12	2,004.60
TOTAL	$ 106,218.06	$ $20,170.92
Net Costs	$ 1,257,781.94	$ 427,889.08
Less Reserves	1,364,000.00	448,060.00
TOTAL	$ 106,218.06	$ 20,170.92

Attachment 3

7207 BUFF
G7207 GREEN TINT

CONTRACT -33808 - BURDEN ADJUSTMENT 10-31-61

Department		10-31-61 1961 Hours & Burden Hours	10-31-61 1961 Hours & Burden Burden	Act. Rate	Projected Rate	Projected Amount	Burden Adjustment
Engr. Des. & Tech.		3643	16426	451	454	16539	113
Wind Tunnel		-	-				
Edwards		-					
Holloman		-					
Lexington		-					
Dayton		-					
Expr. Flight		-					
Prod. Flight		-	-				
Service Pubs.		-	-				
Service Engr.		-	-				
Field Service Reps.		2072	6790	328	(A)328	6790	—
Tool Eng.		-	-				
Tool Mfg.		-	-				
Prod. Factory		< 396 >	< 2030 >	513	(E)515	< 2030 >	—
Palmdale		-	-				
Plant Eng. & Mfg. Aids		-	-				
Mfg. Dev.		-	-				
Inspection		428	1057	247	317	1357	300
Shipping		1654	5195	314	317	5243	48
Allocation		-	-				
Exp. Fact		8	25	313	317	25	-
TOTAL (.G.O.)		7409	1718	232	28	2075	357
	Sh Be 74295						
TOTAL		7409	27463			27924	461 ✓

GENERAL DYNAMICS/CONVAIR

1 December 1961

MODEL 8 CONTRACT AF33(600)33808
ANALYSIS OF COST TO COMPLETE AS OF 31 OCTOBER 1961
MANUFACTURING MATERIAL
(EXCLUDES SPARES EXCEPT AS NOTED)

Cost Category	Accumulated Costs Thru 10/31/61	Indicated Cost To Complete	Indicated Cost 10/31/61	Final Budget 12/31/61
Purchased Parts & Raw Material Including Mfg. Usage Variance	$16,788,501	$ 9,216	$16,797,717	$15,779,234
Surplus and Obsolete	1,186,673	177,327	1,364,000	813,208
Rework	854,563	-0-	854,563	229,872
Subcontracted Cost - San Diego	27,345,103	-0-	27,345,103	27,482,308
- Fort Worth	28,693,734	-0-	28,693,734	29,431,423
Total Mfg. Material & S/C Costs	$74,868,574	$186,543	$75,055,117	$73,736,045
Program & Experimental Costs				
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ 2,429,468	$ 1,326	$ 2,430,794	$ 2,830,033
Cancellation Costs	783,643	5,547	789,190	532,337
Dev. Test & Experimental Material	14,586	-0-	14,586	49,862
Experimental Subcontract	690	-0-	690	-0-
Total Program & Experimental Costs	$ 3,228,387	$ 6,873	$ 3,235,260	$ 3,412,232
GRAND TOTAL	$78,096,961	$193,416	$78,290,377	$77,148,277

NOTES: Surplus and obsolete indicated cost includes cost for both production and spares.

Cancellation indicated costs reflect open and potential cancellation claims for production and spares material.

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Prepared by: D. M. Parker

Approved by:
C. M. Gauss, Jr.
Material Cost Manager

MONTHLY BU[illegible] & SCHEDULE STATUS REPORT
ENGINEERING DEPT

PROJECT F-106 A/B AIRPLANES - DES/TECH (88 A/P)

MONTH ENDING NOVEMBER '61
CONTRACT NO. [illegible]

DEPT	CATEGORY	ESTIMATED DIRECT LABOR RATE	DIRECT LABOR HOURS	MATERIAL DOLLARS	SUB-CONTRACT DOLLARS	TRAVEL $ PER DIEM	COMPUTER DOLLARS	PHOTO-LAB DOLLARS	SPEC TEST EQUIPMENT $
55-1	STRUCT LABORATORY (Subsonic Test)								
55-7	STRUCT LABORATORY (Supersonic Test)								
59	WIND TUNNEL								
6	EXP FLIGHT								
6	PROD FLIGHT								
6	DESIGN & TECH	*	906,220	$ 686,552		$ 112,654			
	10-31-61 ACTS		904697	684451		112654			
			1523	2101		0			
	TOTAL ENGINEERING								
21 EXP FACT	DEPT TOTAL								
	Change	*	906220						
	Rev		134	Cancelled					
	Per S. Munro 12-27		906354						

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PROJECT ANALYSIS SECTION

SCHED COMPLETION DATE	INDICATED COMPLETION DATE	PREP BY	
31 MARCH 1961	July 1962	E. C. Reading	Signed by J.R. O'[illegible] 12/7/61

SIGNED DEPT & SERIAL

4879

Contract AF 33 (600)-33808 F-106A/B

First F-106 fixed-price incentive follow-on. Complete

Bob Fetterly preparing final negotiation brochure.

No detail budget. Carried as one-line item on summary report. Data recorded in summary book.

Match brochure figures in summary report when brochure finalized for negotiation.

GENERAL DYNAMICS/CONVAIR

5 October 1961

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ROJECT ANALYSIS SECTION

MODEL 8 CONTRACT AF33(600)33808
ANALYSIS OF COST TO COMPLETE AS OF 31 AUGUST 1961
MANUFACTURING MATERIAL
(EXCLUDES SPARES EXCEPT AS NOTED)

Cost Category	Accumulated Costs Thru 8-31-61	Indicated Cost To Complete	Indicated Cost 8-31-61
Purchased Parts & Raw Material including Mfg. Usage Variance	$16,788,287	$ -0-	$16,788,287
Surplus and Obsolete	1,177,224	186,776	1,364,000
Rework	854,564	-0-	854,564
Subcontracted Cost - San Diego	27,345,089	-0-	27,345,089
- Fort Worth	28,765,658	-0-	28,765,658
Total Mfg. Material & S/C Costs	$74,930,822	$186,776	$75,117,598
Program & Experimental Costs			
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ 2,429,468	$ 1,467	$ 2,430,935
Cancellation Costs	749,147	17,014	766,161
Dev. Test & Experimental Material	14,586	-0-	14,586
Experimental Subcontract	690	-0-	690
Total Program & Experimental Costs	$ 3,193,891	$ 18,481	$ 3,212,372
GRAND TOTAL	$78,124,713	$205,257	$78,329,970

NOTES: Surplus and obsolete indicated cost includes cost for both production and spares.

Cancellation indicated costs reflect open and potential cancellation claims for production and spares material.

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Prepared by: D. M. Parker

Approved by:
C. M. Gauss, Jr.
Material Cost Manager

REVISIONS - ACTIVE WORK ORDER LIST

DATE 28 December 1961

To: HOLDERS OF ACTIVE WORK ORDER LISTS; - Model 8 (Code 1)

Attached are revisions to the Active Work Order List. Please remove the applicable pages from your list and replace with the following:

			Work Orders Affected	
Beginning W.O. No.	Ending W.O. No.	Revisions	New Numbers	Deletions

The attached Active Work Order List is a complete re-issue of Work Order Series 19xxx as of 28 December 1961. Please insert the attached pages in your Active Work Order Book and destroy all notices and lists dated prior to the above date.

Work Order Notice Numbers Incorporated into above pages:

Destroy Copies of Work Order Notices issued during current month if such notices have been included in the revisions shown above.

Cost Accounting Department

CONVAIR-SD-3137-1

FORM 3169-8

CONVAIR — SAN DIEGO

ACTIVE WORK ORDER LIST

Project MODEL 8

Contract AF33(600)-33808

Work in Process Account 137

WORK ORDER NUMBER	RESPONSIBILITY	DESCRIPTION
19030 (1-E)	Factory	Purchased Parts Scrapped - Cost of purchased parts scrapped as a result of damage during airframe assembly operations shall be collected in this work order. Normal procedure is for the damaged parts to be returned to Division Stores on an "exchange basis" by the Production Dept. A review is made and if the part is not repairable, it is sent to salvage. This work order shall be used to send the scrapped part to salvage. The requisition accomplishing the transaction must reference the IR number. Material rejected by Receiving Inspection for which the Buyer's decision is "scrap at Convair expense" shall be requisitioned from stores and sent to salvage charged to this work order. The requisition accomplishing the transaction must reference the IR number.
19039 (1-E)	Factory	Other Manufacturing Costs - Material, labor and overhead of other manufacturing costs such as: A. Shipping costs B. Royalties, property taxes, fire insurance, etc. C. Distribution from allocation work orders for items such as heat treating and anodizing, rivet manufacture, freight, etc. D. Other direct mfg. costs not listed in lot or rework cost work orders which are off standard tasks.
19049 (1-E)	Inspection	Production Inspection - Inspection costs as follows: A. Receiving Inspection labor B. Inspection labor on the production line C. Inspection labor performed at outside vendors D. Assist labor to Inspection in accordance with SP 6-8 E. Inspection material costs of X-ray film and solutions Note: Use W/O 19749 for Spares and W/O 19849 for GSE.
19066 (4-T)	Factory	Vendor Program Costs - Costs required by a vendor in developing parts production for Convair. These costs include research and development, engineering planning, design, mfg. and testing of tools and any other cost required to the point of production run of parts. Convair may provide specifications to the vendor who develops prints, tools, etc. for production parts for Convair. This does not include GSE. Purchasing Section of Material Dept. will be responsible for segregating vendor program costs on P/O's.
19068 (1-E)	Factory	Surplus and Obsolete Materials - Cost of materials procured as a result of requirements which have become surplus or obsolete due to Engineering or other requirement changes and is now to be transferred to the Salvage Yard for final disposition.

Issue Date 28 December 1961

FORM 3169-B

CONVAIR — SAN DIEGO

ACTIVE WORK ORDER LIST

Project MODEL 8

Contract AF33(600)-33808

Work in Process Account 137

WORK ORDER NUMBER	RESPONSIBILITY	DESCRIPTION
19069 (1-E)	Factory	Cancellation Costs - Vendor cancellation costs due to Engineering or other requirement changes.
19547 (4-T)	Engineering	Engineering costs to write, edit and clarify Model 8 specification drawings.

Issue Date 28 December 1961

-34814

Contr 348.4
WO 21XXX

Open Commit 12-31-62

WO	Dept	
21839	6	$ 49.00
21859	6	20.00
21881	6	24,338.00 UN 2168 PO 600850
Total		$24,407

All of above are CSE

GENERAL DYNAMICS/CONVAIR
CVR 43-0-11

19 October 1962

INDICATED COST REPORT CONTRACT AF33(600)34814 (MONTHLY)
AS OF 30 SEPTEMBER 1962 - MANUFACTURING MATERIAL
(EXCLUDES SPARES EXCEPT AS NOTED)

Cost Category	Accumulated Costs Thru 9-30-62	Indicated Cost To Complete	Indicated Cost 9-30-62	Final Budget 12-31-60
Purchased Parts & Raw Material including Mfg. Usage Variance	$ 9,327,468	$ (3,881)	$ 9,323,587	$ 9,166,905
Surplus and Obsolete	329,129	7,031	336,160	436,466
Rework	198,825	-0-	198,825	218,170
Subcontracted Cost - San Diego	12,358,617	-0-	12,358,617	13,961,599
- Fort Worth	2,133,087	-0-	2,133,087	2,018,074
Total Mfg. Material & S/C Costs	$24,347,126	$ 3,150	$24,350,276	$25,801,214
Program & Experimental Costs				
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ 517,784	-0-	$ 517,784	$ 501,694
Cancellation Costs	48,815	-0-	48,815	272,670
Dev. Test & Experimental Material	11,665	-0-	11,665	8,669
Experimental Subcontract	-0-	-0-	-0-	-0-
Total Program & Experimental Costs	$ 578,264	-0-	$ 578,264	$ 783,033
GRAND TOTAL	$24,925,390	$ 3,150	$24,928,540	$26,584,247

Prepared by: D M Parker
D. M. Parker

Approved by: Richman
J. L. Richman
Chief of Material Costs & Budgets

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OCT 24 1962
W. W. HASS

GENERAL DYNAMICS/CONVAIR
CVR 43-0-11

19 April 1962

DATE RECEIVED
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INDICATED COST REPORT CONTRACT AF33(600)34814 (Monthly)
AS OF 31 MARCH 1962 **- MANUFACTURING MATERIAL**
(EXCLUDES SPARES EXCEPT AS NOTED)

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PROJECT ANALYSIS SECTION

Cost Category	**Accumulated Costs Thru 3-31-62**	**Indicated Cost To Complete**	**Indicated Cost 3-31-62**	**Budget 12-31-61**
Purchased Parts & Raw Material Including Mfg. Usage Variance	$ 9,166,749	$(31,111)	$ 9,135,638	$ 9,166,905
Surplus and Obsolete	349,965	98,095	448,060	436,466
Rework	198,825	-0-	198,825	218,170
Subcontracted Cost - San Diego	12,358,714	-0-	12,358,714	13,961,599
- Fort Worth	2,134,178	5,784	2,139,962	2,018,074
Total Mfg. Material & S/C Costs	$24,208,431	$ 72,768	$24,281,199	$25,801,214
Program & Experimental Costs				
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ 517,784	$ -0-	$ 517,784	$ 501,694
Cancellation Costs	48,471	211	48,682	272,670
Dev. Test & Experimental Material	11,665	-0-	11,665	8,669
Experimental Subcontract	-0-	-0-	-0-	-0-
al Program & Experimental Costs	$ 577,920	$ 211	$ 578,131	$ 783,033
GRAND TOTAL	$24,786,351	$ 72,979	$24,859,330	$26,584,247

NOTES: Surplus and obsolete indicated costs include costs for both production and spares.

Cancellation indicated costs include coverage for open and potential cancellation claims for both production and spares.

Purchased Parts and Raw Material credit cost to complete is forecasted effect of accountability transfers and S&O charges, and is based on current information received from the Program Accountability section of Material Control which is in the process of auditing Model F-106 contracts.

Prepared by: Doris Parker

Approved by:
for G. W. Zahrte
Procurement Manager

GENERAL DYNAMICS/CONVAIR
CVR 43-0-11

19 April 1962

DATE RECEIVED:
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A. L. HENDRICKS

INDICATED COST REPORT CONTRACT AF33(600)34814 (Monthly)
AS OF 31 MARCH 1962 **- MANUFACTURING MATERIAL**
(EXCLUDES SPARES EXCEPT AS NOTED)

RECEIVED
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ROJECT ANALYSIS SECTION

Cost Category	**Accumulated Costs Thru 3-31-62**	**Indicated Cost To Complete**	**Indicated Cost 3-31-62**	**Budget 12-31-61**
Purchased Parts & Raw Material Including Mfg. Usage Variance	$ 9,166,749	$(31,111)	$ 9,135,638	$ 9,166,905
Surplus and Obsolete	349,965	98,095	448,060	436,466
Rework	198,825	-0-	198,825	218,170
Subcontracted Cost - San Diego	12,358,714	-0-	12,358,714	13,961,599
- Fort Worth	2,134,178	5,784	2,139,962	2,018,074
Total Mfg. Material & S/C Costs	$24,208,431	$ 72,768	$24,281,199	$25,801,214
Program & Experimental Costs				
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ 517,784	$ -0-	$ 517,784	$ 501,694
Cancellation Costs	48,471	211	48,682	272,670
Dev. Test & Experimental Material	11,665	-0-	11,665	8,669
Experimental Subcontract	-0-	-0-	-0-	-0-
[illegible]al Program & Experimental Costs	$ 577,920	$ 211	$ 578,131	$ 783,033
GRAND TOTAL	$24,786,351	$ 72,979	$24,859,330	$26,584,247

NOTES: Surplus and obsolete indicated costs include costs for both production and spares.

Cancellation indicated costs include coverage for open and potential cancellation claims for both production and spares.

Purchased Parts and Raw Material credit cost to complete is forecasted effect of accountability transfers and S&O charges, and is based on current information received from the Program Accountability section of Material Control which is in the process of auditing Model F-106 contracts.

Prepared by: Davis Parker

Approved by:
for
G. W. Zahrte
Procurement Manager

GENERAL DYNAMICS/CONVAIR
CVR-43-0-11

9 February 1962

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SECTION

INDICATED COST REPORT CONTRACT AF33(600)34814 (Monthly) AS OF 31 DECEMBER 1961 - MANUFACTURING MATERIAL (EXCLUDES SPARES EXCEPT AS NOTED)

Cost Category	Accumulated Costs Thru 12-31-61	Indicated Cost To Complete	Indicated Cost 12-31-61	Final Budget 12-31-61
Purchased Parts & Raw Material Including Mfg. Usage Variance	$ 9,060,603	$(25,425)	$ 9,035,178	$ 9,166,905
Surplus and Obsolete	352,550	95,510	448,060	436,466
Rework	198,825	-0-	198,825	218,170
Subcontracted Cost - San Diego	12,358,713	-0-	12,358,713	13,961,599
- Fort Worth	2,134,759	5,203	2,139,962	2,018,074
Total Mfg. Material & S/C Costs	$24,105,450	$ 75,288	$24,180,738	$25,801,214
Program & Experimental Costs				
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ 518,245	$ -0-	$ 518,245	$ 501,694
Cancellation Costs	48,471	211	48,682	272,670
Dev. Test & Experimental Material	11,665	-0-	11,665	8,669
Experimental Subcontract	-0-	-0-	-0-	-0-
Total Program & Experimental Costs	$ 578,381	$ 211	$ 578,592	$ 783,033
GRAND TOTAL	$24,683,831	$ 75,499	$24,759,330	$26,584,247

NOTES: Surplus and obsolete indicated costs include costs for both production and spares.

Cancellation indicated costs include coverage for open and potential cancellation claims for both production and spares.

Purchased Parts and Raw Material credit cost to complete is forecasted effect of accountability transfers and S&O charges.

Prepared by Lois M. Parker

Approved by
for C. M. Gauss, Jr.
Material Costs, Contracts & Services
Manager

GENERAL DYNAMICS/CONVAIR

15 December 1961

MODEL 8 CONTRACT AF33(600)34814
ANALYSIS OF COST TO COMPLETE AS OF 30 NOVEMBER 1961
MANUFACTURING MATERIAL
(EXCLUDES SPARES EXCEPT AS NOTED)

Cost Category	Accumulated Costs Thru 11-30-61	Indicated Cost To Complete	Indicated Cost 11-30-61	Final Budget 12-31-61
Purchased Parts & Raw Material Including Mfg. Usage Variance	$ 9,042,364	$(6,725)	$ 9,035,639	$ 9,166,905
Surplus and Obsolete	365,726	82,334	448,060	436,466
Rework	198,825	-0-	198,825	218,170
Subcontracted Cost - San Diego	12,358,713	-0-	12,358,713	13,961,599
- Fort Worth	2,134,873	5,089	2,139,962	2,018,074
Total Mfg. Material & S/C Costs	$24,100,501	$ 80,698	$24,181,199	$25,801,214
Program & Experimental Costs				
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ 517,784	$ -0-	$ 517,784	$ 501,694
Cancellation Costs	48,471	211	48,682	272,670
Dev. Test & Experimental Material	11,665	-0-	11,665	8,669
Experimental Subcontract	-0-	-0-	-0-	-0-
Total Program & Experimental Costs	$ 577,920	$ 211	$ 578,131	$ 783,033
GRAND TOTAL	$24,678,421	$ 80,909	$24,759,330	$26,584,247

NOTES: Surplus and obsolete indicated costs include costs for both production and spares.

Cancellation indicated costs include coverage for open and potential cancellation claims for both production and spares.

Purchased Parts and Raw Material credit cost to complete is forecasted effect of accountability transfers and S&O charges.

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Prepared by: D. M. Parker

Approved by:
C. M. Gauss, Jr.
Material Cost Manager

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CONTRACT - 34814 - BURDEN ADJUSTMENT

10-31-61

	10-31-61		Act.	Projected		Burden
	1961 Hours & Burden		Rate	Rate	Amount	Adjustment
Department	Hours	Burden				
Engr. Des. & Tech.	3885	17597	453	454	17638	41
Wind Tunnel	–					
Edwards						
Holloman						
Lexington						
Dayton						
Expr. Flight						
Prod. Flight	–	–				
Service Pubs.	40	34	85	85	34	–
Service Engr.	3184	14357	451	454	14455	98
Field Service Reps.	1134	3666	323	323	3666	–
Tool Eng.	–	–				
Tool Mfg.	–	< 1 >	–	–	< 1 >	–
Prod. Factory	1486	2782	187	317	4711	1929
Palmdale	–	–			–	–
Plant Eng. & Mfg. Aids	–	–	–		–	–
Mfg. Dev.	–	–	–		–	–
Inspection	1692	5044	298	317	5364	320
Shipping	479	1505	314	317	1518	13
Allocation	2	–	–	–	–	–
Exp. Fact.	–	–	–		–	–
TOTAL (.G.O.)	11902	2166	.232	28	3333	567
	should be 11919					
TOTAL	11902	44984			47386	2401

MONTHLY B[illegible]T & SCHEDULE STATUS REPORT

ENGINEERING

PROJECT F[illegible] Des/Tech (45 M/F)

MONTH ENDING [illegible]BER '61

CONTRACT NO. AF 33(600) 37414

DEPT	CATEGORY	ESTIMATED DIRECT LABOR RATE	DIRECT LABOR HOURS	MATERIAL DOLLARS	SUB-CONTRACT DOLLARS	TRAVEL & PER DIEM	COMPUTER DOLLARS	PHOTO-LAB DOLLARS	SPEC TEST EQUIPMENT
[illegible]	[illegible]								
46 2	STRUCT LABORATORY (Supersonic Test)								
69	WIND TUNNEL								
6	EXP FLIGHT								
6	PROD FLIGHT								
6	DESIGN & TECH		113,298	$49,163		$20,195			
	10-31-61 ACTS		111 922	47763		20195			
	ETC		1976	1400.		~~0~~			
	TOTAL ENGINEERING								
31 EXP FACT	DEPT TOTAL								

RECEIVED
DEC 7 1961
[illegible] ANALYSIS SECTION

SCHED COMPLETION DATE June 1961

INDICATED COMPLETION DATE 1 July 1962

PREP BY E. C. Reading

Signed by [illegible] 12/4/61

RECEIVED
ESTIMATING DEPT.
DEC 8 - 1961
AM PM
7,8,9,10,11,12,1,2,3,4,5,6

GENERAL DYNAMICS/CONVAIR

1 December 1961

MODEL 8 CONTRACT AF33(600)34814
ANALYSIS OF COST TO COMPLETE AS OF 31 OCTOBER 1961
MANUFACTURING MATERIAL
(EXCLUDES SPARES EXCEPT AS NOTED)

Cost Category	Accumulated Costs Thru 10-31-61	Indicated Cost To Complete	Indicated Cost 10-31-61	Final Budget 12-31-60
Purchased Parts & Raw Material Including Mfg. Usage Variance	$ 9,041,498	$(7,627)	$ 9,033,871	$ 9,166,905
Surplus and Obsolete	362,627	85,433	448,060	436,466
Rework	198,634	189	198,823	218,170
Subcontracted Cost - San Diego	12,358,713	-0-	12,358,713	13,961,599
- Fort Worth	2,135,003	6,729	2,141,732	2,018,074
Total Mfg. Material & S/C Costs	$24,096,475	$ 84,724	$24,181,199	$25,801,214
Program & Experimental Costs				
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ 517,784	$ -0-	$ 517,784	$ 501,694
Cancellation Costs	48,471	211	48,682	272,670
Dev. Test & Experimental Material	11,665	-0-	11,665	8,669
Experimental Subcontract	-0-	-0-	-0-	-0-
Total Program & Experimental Costs	$ 577,920	$ 211	$ 578,131	$ 783,033
GRAND TOTAL	$24,674,395	$ 84,935	$24,759,330	$26,584,247

NOTES: Surplus and obsolete indicated costs include costs for both production and spares.

Cancellation indicated costs include coverage for open and potential cancellation claims for both production and spares.

Purchased Parts and Raw Material credit cost to complete is forecasted effect of accountability transfers and S&O charges.

Prepared by: D. M. Parker

Approved by:
C. M. Gauss, Jr.
Material Cost Manager

454P

Contract AF 33(600)-34814 F-106A/B

Second F-106 fixed-price incentive follow-on. Complete.

Bob Fetterly preparing final negotiation brochure.

No detail budget. Carried as a one-line item on summary report. Data recorded in summary book.

Watch brochure figures in summary report when brochure finalized for negotiation.

REVISIONS - ACTIVE WORK ORDER LIST

DATE 29 December 1961

To: **HOLDERS OF ACTIVE WORK ORDER LISTS:** - MODEL 8 (Code 1)

Attached are revisions to the Active Work Order List. Please remove the applicable pages from your list and replace with the following:

			Work Orders Affected	
Beginning W.O. No.	Ending W.O. No.	Revisions	New Numbers	Deletions

The attached Active Work Order List is a complete re-issue of Work Order Series 21xxx as of 28 December 1961. Please insert the attached pages in your Active Work Order Book and destroy all notices and lists dated prior to the above date.

Work Order Notice Numbers Incorporated into above pages:

Destroy Copies of Work Order Notices issued during current month if such notices have been included in the revisions shown above.

Cost Accounting Department

CONVAIR-SD-3137-1

FORM 3169-B

CONVAIR — SAN DIEGO

ACTIVE WORK ORDER LIST

Project MODEL 8

Contract AF33(600)-34814

Work in Process Account 137

WORK ORDER NUMBER	RESPONSIBILITY	DESCRIPTION
21030 (1-E)	Factory	Purchased Parts Scrapped - Cost of purchased parts scrapped as a result of damage during airframe assembly operations shall be collected in this work order. Normal procedure is for the damaged parts to be returned to Division Stores on an "exchange basis" by the Production Dept. A review is made and if the part is not repairable, it is sent to salvage. This work order shall be used to send the scrapped part to salvage. The requisition accomplishing the transaction must reference the IR number. Material rejected by Receiving Inspection for which the Buyer's decision is "scrap at Convair expense" shall be requisitioned from stores and sent to salvage charged to this work order. The requisition accomplishing the transaction must reference the IR number.
21039 (1-E)	Factory	Other Manufacturing Costs - Labor and material of other manufacturing costs such as: a. Shipping costs b. Royalties, property taxes, fire insurance, etc. c. Distribution from allocation work orders for items such as heat treating and anodizing, rivet manufacture, freight, etc. d. Other direct mfg. costs not listed in lot or rework cost work orders which are "off-standard" tasks.
21049 (4-T)	Inspection	Production Inspection - Inspection costs as follows: a. Receiving Inspection labor b. Inspection labor on the production line c. Inspection labor performed at outside vendors d. Assist labor to Inspection in accordance with SP 6-8 e. Inspection material costs of x-ray film and solutions Note: Use W/O 21749 for Spares and 21849 for GSE
21066 (4-T)	Factory	Vendor Program Costs - Costs required by a vendor in developing parts production for Convair. These costs include research and development, engineering planning, design, mfg. and testing of tools and any other cost required to the point of production run of parts. Convair may provide specifications to the vendor who develops prints, tools, etc. for production parts for Convair. This does not include spare parts. Purchasing Section of Material Dept. will be responsible for segregating vendor program costs on P/O's.
21068 (1-E)	Factory	Surplus and Obsolete Materials - Cost of materials procured as a re-result of requirements which have become surplus or obsolete due to engineering or other requirement changes and is now to be transferred to the Salvage Yard for final disposition.

Issue Date 29 December 1961

FORM 3169-B

CONVAIR—SAN DIEGO

ACTIVE WORK ORDER LIST

Project MODEL 8

Contract AF33(600)-34814

Work in Process Account 137

WORK ORDER NUMBER	RESPONSIBILITY	DESCRIPTION
21069 (1-E)	Factory	Cancellation Costs - Vendor cancellation costs due to engineering or other requirement changes.
21547 (4-T)	Engineering	Engineering costs to write, edit and clarify Model 8 specification drawings.
21737 (1-E)	Dept. Chrg.	Cost of Shipping Spares.
21811 (1-E)	Dept. Chrg.	Manufactured GSE - Costs of labor and material to manufacture GSE (including KD purchased and KD subcontracted parts).
21837 (1-E)	Dept. Chrg.	Costs of shipping Ground Support Equipment. (GSE)
21849 (1-E)	Inspection	Inspection - Cost of Ground Service Equipment Inspection
21881 (4-T)	Dept. Chrg.	GSE Original Design - Costs of Engineering initial design of Ground Support Equipment that is identifiable to a particular part number.
21887 (4-T)	Dept. Chrg.	Tooling Costs - In-plant tool design, tool engineering review and tool mfg. on Ground Support Equipment.

Issue Date 29 December 1961

-40599

CONTRACT AF33(600)-40599

Reconciliation of the 11-30-62 Project Budget Report to the Amount Funded to Date

	COST	FEE	PRICE
Total Per 11-30-62 Project Budget Status Report	$11,685,154	$705,398	$12,390,552
Less: Items Covered by SA #1 to be deleted in December accounting:			
CPO 60-6-33; CCN (1)	9,963	598	10,561
Repair NO 57-243; CCN (2)	3,272	-	3,272
Subtotal deletions	$ 13,235	$ 598	$ 13,833
Total Adjusted Quotation 11-30-62	$11,671,919	$704,800	$12,376,719
Total Contract Value Per AF Letter 12-3-62			$12,031,680 *
Plus: Items in Quote Not Funded:			
CPO 61-6-2 Part II; SA 4; CCN (11)			184,119
CPO 61-6-20; SA 5; CCN (13)			155,682
CPO 62-6-2 Rev. 5192; CCN (17)			116,072
Less: Funded Amount			(88,700)
CPO 62-6-18 Rev. 519AA; CCN (20)			62,866
Less: Funded Amount			(85,000)
Subtotal Not Funded			$ 345,039
Total Per Adjusted Quotation 11-30-62			$12,376,719

* According to our records this is the amount funded to date and not the contract value per basic contract and modifications through No. 7 plus our proposals for CCN's 17 and 20.

Project Budget
12-18-62

Contract AF 33(600) 40599

Reconciliation of the 11-30-62 Project Budget Report to the Amount Funded To Date

7207 BUFF
G7207 GREEN TI

	COST	FEE	PRICE
Total Per 11/30/62 Project Budget Status Report	$11685154	$705398	$12390552
Less: Items Covered by SA #1 to be deleted in December accounting:			
CPO 64-6-33; ECN (1)	9963	598	10561
Repair No 57-243, ECN (2)	3272	—	3272
Sub total deletions	$13235	$598	$13833
Total Adjust Quotation 11-30-62	$11671919	$704800	$12376719
Total Contract Value Per AF Letter 12-1-62			$12031680 *
Plus; Items in Quote not funded;			
CPO 61-6-2 PART II ; SA 4 ; ECN (11)			184119
CPO 61-6-20 ; SA 5 ; ECN (13)			155682
CPO 62-6-2 REV 5192 ; ECN (17)			116072
LESS: FUNDED AMOUNT			< 88700 >
CPO 62-6-8 REV 519AA ; ECN (20)			62866
LESS: FUNDED AMOUNT			< 85000 >
SUBTOTAL NOT FUNDED			$345039
Total Per Adjusted Quotation 11-30-62			$12376719

* According to our records this is the amount funded to date and not the contract value. Your basic contract and modifications through No. 7 plus our proposals for ECN's 17 and 20

PROJECT BUDGETS

(OVER)

10-28-62

CONTRACT AF33(600)-[illegible] — COST TO COMPLETE

10-31-62

	ANALYSIS OF COST TO COMPLETE 10-31-62			
	TOTAL PER ~~10-31-62~~ BUDGET REPORT	FATIGUE ANALYSIS	DAYTON	SLED TESTS
ENGINEERING HOURS	8499	7372	192	935
L-O-B	88032	76358	1989	9685
MATERIAL + SUB CONTRACT	80513	17087	—	63426
TRAVEL + PER DIEM	7221	4125	300	2796
INSTRUMENTATION	200	—	—	200
SUB TOTAL — ENG	175966	97570	2289	76107
DAYTON HOURS	3247	—	3247	—
L-O-B	27784	—	27784	—
TRAVEL + PER DIEM	12053	—	12053	—
SUB TOTAL — DAYTON	39837	—	39837	—
HOLLOMAN — L-O-B	(351)	(351)	—	—
TOOL ENGINEERING — HOURS	9	—	—	9
L-O-B	79	—	—	79
PRODUCTION FACTORY — HOURS	70	—	—	70
L-O-B	576	—	—	576
EXPERIMENTAL FACTORY — HOURS	1695	—	—	1695
L-O-B	13904	—	—	13904
PRODUCTION FLIGHT — L-O-B	(11)	(11)	—	—
INSPECTION — HOURS	108	—	—	108
L-O-B	920	—	—	920
MATERIAL — PM + PA	55665	5745	—	64603
DEV + TEST	10303			
S + O	998	498	—	500
CANCELLATION	14294	—	—	00 525 14284
PROD SUB CONTR	14441	5218	—	5216
EXPER " "	373			
SUB TOTAL MATERIAL	96064	11461	—	84603
OTHER DIRECT	97[illegible]	525	245	200
G+A BURDEN	1471	796	371	304
TOTAL COST TO COMPLETE	3[illegible]4[illegible]	109991	42742	176693
TOTAL HOURS	13[illegible]	7372	3439	2817

Overstatement of Indicated Cost
(Material)

Dept	TOTAL	FAT ANALYSIS	DAYTON	SLED TESTS
Eng. Dept	10,000			10,000
Material Dept	39 800	4,800		35,000
TOTAL	49,800	4,800		45,000

PROJECT BUDGETS

10-28-62

CONTRACT AF33(6[illegible]) - [illegible]

10-31-62

	ANALYSIS OF COST TO COMPLETE 10-31-62			
	TOTAL PER ~~10-31-62~~ BUDGET REPORT	FATIGUE ANALYSIS	DAYTON	SLED TESTS
ENGINEERING HOURS	8499	7372	192	935
L-O-B	88032	76358	1989	9685
MATERIAL + SUB CONTRACT	80513	17087	—	63426
TRAVEL + PER DIEM	7221	4125	300	2796
INSTRUMENTATION	200	—	—	200
SUB TOTAL ENG	175966	97570	2289	76107
DAYTON HOURS	3247	—	3247	—
L-O-B	27784	—	27784	—
TRAVEL + PER DIEM	12053	—	12053	—
SUB TOTAL - DAYTON	39837	—	39837	—
HOLLOMAN - L-O-B	⟨351⟩	⟨351⟩	—	—
TOOL ENGINEERING - HOURS	9	—	—	9
L-O-B	79	—	—	79
PRODUCTION FACTORY - HOURS	70	—	—	70
L-O-B	576	—	—	576
EXPERIMENTAL FACTORY - HOURS	1695	—	—	1695
L-O-B	13904	—	—	13904
PRODUCTION FLIGHT - L-O-B	⟨11⟩	⟨11⟩		—
INSPECTION - HOURS	108	—	—	108
L-O-B	920	—	—	920
MATERIAL - PMAPP	55665	5745	—	64603
LED + TEST	10303			
S + O	998	498	—	500
CANCELLATION	14294	—	—	DC 535 14294
PROD SUB CONTR	14441	5218	—	5216
EXPER " "	373			
SUB TOTAL MATERIAL	96064	11461	—	84603
OTHER DIRECT	971	525	245	200
G + A BURDEN	1471	796	371	304
TOTAL COST TO COMPLETE	[illegible]	109991	42742	176693
T[illegible] HOURS	[illegible]	7372	3439	2817

PROJECT. BUDGETS

10-28-62
ABK

CONTRACT AF33 (600)-40599 – COST TO COMPLETE
10-31-62

	ANALYSIS OF COST TO COMPLETE 10-31-62			
	TOTAL PER ~~10-31-62~~ BUDGET REPORT	FATIGUE ANALYSIS	DAYTON	SLED TESTS
ENGINEERING HOURS	8499	7372	192	935
L-O-B	88032	76358	1989	9685
MATERIAL + SUBCONTRACT	80513	17087	–	63426
TRAVEL + PER DIEM	7221	4125	300	2796
INSTRUMENTATION	200	–	–	200
SUB TOTAL – ENG	175966	97570	2289	76107
DAYTON HOURS	3247	–	3247	–
L-O-B	27784	–	27784	–
TRAVEL + PER DIEM	12053	–	12053	–
SUB TOTAL – DAYTON	39837	–	39837	–
HOLLOMAN – L-O-B	< 351 >	< 351 >	–	–
TOOL ENGINEERING – HOURS	9	–	–	9
L-O-B	79	–	–	79
PRODUCTION FACTORY – HOURS	70	–	–	70
L-O-B	576	–	–	576
EXPERIMENTAL FACTORY – HOURS	1695	–	–	1695
L-O-B	13904	–	–	13904
PRODUCTION FLIGHT – LOB	< 11 >	< 11 >	–	–
INSPECTION – HOURS	108	–	–	108
L-O-B	920	–	–	920
MATERIAL – PM + PP	55665	5745	–	64603
DEV + TEST	10303			
S + O	998	498	–	500
CANCELLATION	14284	–	–	00 525 14284
PROD SUB CONTR	14441	5218	–	5216
EXPER " "	373			
SUB TOTAL MATERIAL	96064	11461	–	84603
OTHER DIRECT	970	525	245	200
G.A. BURDEN	1471	796	371	304
TOTAL COST TO COMPLETE	329425	109990	42742	176693
TOTAL HOURS	13628	7372	3439	2817

QUOTATION - RECONCILIATION

CONTRACT 40599

9-30-62

7207 BUFF
G7207 GREEN TINT

DESCRIPTION				COST	FEE	PRICE
CONTRACTUAL COVERAGE						
BASIC CONTRACT				2538190	152291	2690481
SA #	1	11-10-60		7200000	432000	7632000
	2	6-14-61		1170000	80000	1250000
	3	4-4-61		1502	90	1592
	4	9-25-61		173647	10422	184119
	5	10-17-61		146870	8812	155682
	6	3-6-62		50701	1499	52200
	7	7-6-62 (REC'D 9-26-62)		218591	13116	231707
TOTAL CONTRACTUAL COVERAGE				11499551	698230	12197781
ITEMS NOT COVERED						
* EPO 60-6-33 XQ-4B DRONE TEST			10N-131 (1)	9963	598	10561
* MISC REPAIR FIDGA 57-243			1N-193 (2)	3272	-0-	3272
EPO 62-6-2 SLED TEST (2M8-5192)			2N-2140 (17)	109502	6570	116072
TOTAL OPEN ITEMS				122737	7168	129905
TOTAL QUOTE		9-30-62		11622288	705398	12327686

* INCLUDED IN SA #1 PER G. VETTER 11-29-62
DELETED FROM QUOTE 12-[illegible]-62

7207 BUFF
G7207 GREEN TINT

REDUCTION IN QUOTE (8-31-62)
CONTRACT - 40599

CPO 61-6-38 Web Survey of [illegible] Area Pt I

	COST	COST.	PRICE
In Quote 8-31-62	75005	4500	79505
" " 9-30-62 (SA #7)	54932	3296	58228
TOTAL REDUCTION	20073 ✓	1204	21277

7207 BUFF
G7207 GREEN TINT

PROJECT BUDGET STATUS REPORT
CONTRACT 40599 - 8-31-62

1	2	3	4	5	6	7
	CUMULATIVE	INDICATED COST		QUOTATION		*
	ACTUALS	TO	AT	COVERED	NOT COVERED	
	TO 8-31-62	COMPLETE	COMPLETION	BY SA'S	BY SA'S	TOTAL
ENG	4360139	300307	4660446			
DAYTON	74850	74061	148911			
HOLLOMAN	4478665	102159	4580824			
LEXINGTON	231334	—	231334			
FIELD SER REP	4693	—	4693			
TOOL ENG	29361	21	29382			
TOOL MFG	10353	8	10361			
PROD FACTORY	106875	3816	110691			
EXP. FACTORY	777234	10869	788103			
PROD FLIGHT	134376	871	135247			
INSPECTION	47209	1328	48537			
MATERIAL	338396	96563	434959			
OTHER	2526	974	3500			
GO	266610	< 19347 >	247263			
TOTAL COST	10862621	571630	11434251	11499551	122737	11622288
FEE				698230	7168	705398
PRICE				12197781	129905	12327686

* ADJUSTED TO INCLUDES SA # 17

ANALYSIS OF COST TO COMPLETE

DEPT	HOURS	D/L + OT	BURDEN	M & O SUB CONTR	T & PD	TOTAL
ENG	17304	89157	128518	77472	5160	300307
DAYTON	8177	30827	24149		19085	74061
HOLLOMAN	18	71	97863	4225		102159
TOOL ENG	—		21			21
TOOL MFG	—		8			8
PROD FAC	76	231	3585			3816
EXP FAC	192	578	10291			10869
PROD FLIGHT	—		871			871
INSPECTION	20	64	1264			1328
MATERIAL				96563		96563
FAC OTHER				974		974
GO			< 19347 >			< 19347 >
TOTAL	25787	120928	247223	179234	24245	571630

NOTE: INDICATED COST AND QUOTE DO NOT INCLUDE SO 1089-1-32 SUPERSONIC ESCAPE SYSTEM SLED TEST (REV AA)

DATE
RECEIVED
OCT 24 [illegible]
A. L. HENDRICKS

***Revised: 15 October 1962

Revised: 3 March 1962

Contract: AF3[illegible]
SA #2

[illegible]

[illegible] dated 7 February 1962
(2)
***(b) ASD Letter ASZIK dated 26 Sept. 1962

Copy

[illegible]

***3. In accordance with Reference (b), Convair shall prepare reproducibles of drawings for subject redesigned "B" Seat Survival Kit. These reproducibles are to be shipped to MCIFS, AFLC, Wright-Patterson Air Force Base, Ohio. Please note: copies of these drawings were previously submitted by Convair Letter 6-2645 dated 18 May 1962.

CPO 60-6-53

George Wilson - MZ 6-122C
[illegible] CCH number. ERJ

C. G. Glasgow
Chief of Contract Administration

***Revised to add Ref. (b) and Para. 3. GV:jw

[illegible] 1972

GENERAL DYNAMICS/CONVAIR

SALES ORDER

Sold To: Aeronautical Systems Division
Wright-Patterson Air Force Base, Ohio

Reference: (a) CCN 3N-565(20) dtd 11 Sept. 1962

Date: 12 September 1962

Contract: AF33(600)-40599

S.O. No. 1089-1-32

W.O. No. 527

F-106B SUPERSONIC ESCAPE SYSTEM DEVELOPMENT

1. In accordance with Reference (a), this sales order authorizes the continued development of the F-106B Supersonic Escape System in accordance with Convair Statement of Work Report No. ZM-8-519AA.

Copy

No firm est. Rec'd 10-1-62

GHV:mg
cc: F-106 Distr.
ECP 4049
S.O. Book

S.R. Vetter
for D. H. Digges
Manager of Contracts

Log No. 1765

GD/CONVAIR

RECEIVED
MAR 7 1962
PROJECT ANALYSIS SECTION

Rev 24 April 1962

SALES ORDER

Sold to: Aeronautical Systems Division
Wright-Patterson Air Force Base, Ohio

ECN 2N-2140 (17) 3-12-62

*Revised: 5 March 1962
Date: 16 January 1962
Contract: AF33(600)-40599
S. O. No: 1089-1-28
W. O. No: 527

F-106B Supersonic Escape System Development

1. This Sales Order authorizes the continued development of the F-106B Supersonic Escape System in accordance with Convair Statement of Work, Report No. ZM-8-S19Z.

~~2. This Sales Order is limited to the expenditure of [illegible] *$55,000.~~

No firm estimate as of 4-26-62.
Geo Vetter has requested one.
Will enter quote + budget
when estimate rec'd — probably
in May [illegible].

GRV:ad

G. P. Vetter
for A. J. Reiser
Chief of Contract Administration

cc: ECP 4049
S. O. Book

Log No. ~~239~~ 530

*Revised to amend para. 2.

Firm Est Rec'd
7-30-62 ✓
7-24-62 ✓
11-1-2563
Cost 109,502
F 6570
116,072

CPO 62-6-5

GENERAL DYNAMICS/CONVAIR

SALES ORDER

RECEIVED
APR 2 1962
PROJECT ANALYSIS SECTION

Sold To: Aeronautical Systems Division
Wright-Patterson Air Force Base, Ohio

Reference: (a) CCN2N-2283 (19) dated 23 March '62

Date: 29 March 1962

Contract: AF33(600)-40599

S.O. No. 1089-1-30

W.O. No. 523

Copy

4 62

F-106 STATIC TESTING ASSIST AT WRIGHT-PATTERSON AFB

1. Pursuant to Reference (a), this Sales Order authorizes assist to the Air Force in the full scale F-106 static testing being conducted at Wright-Patterson AFB. All work is to be accomplished in accordance with CPO 62-6-5 revised 12 March 1962, also identified as Convair report 58-6-36R3, dated 20 March 1962.

Subject to negotiation
[illegible]
4-2-62

Copy contract letter requested

Pending quote 4-30-62

GRV:mg
cc: 40599 Fatigue File
Sales Order Book
F-106 Distribution

Log No. 741

G. R. Vetter
for A. J. Reiser
Chief of Contract Administration

Sub a/c 6 — 40599

Sub Contract	APRIL	MAY	TOTAL
521	–	53 22	
523	26440 87	8426 92	
524	–	–	
527	6342 58	408 78	
529	4253 81	90 95	
530	–	–	
531	–	–	
532	84 43	81	
TOTAL	37121 69	8974 68	46096

May	56783
MAR	10460
	46323

GENERAL DYNAMICS/CONVAIR
CVR 43-0-14

16 July 1962

DATE RECEIVED
JUL 18 1962
A. L. HENDRICKS

INDICATED COST REPORT CONTRACT AF33(600)40599 (MONTHLY) AS OF 30 JUNE 1962 - MANUFACTURING MATERIAL (EXCLUDES SPARES EXCEPT AS NOTED)

Cost Category	Accumulated Costs Thru 6/30/62	Indicated Cost To Complete	Indicated Cost 6/30/62	Budget 6/30/62
Purchased Parts & Raw Material including Mfg. Usage Variance	$ 112,863	$ 67,068	$ 179,931 ✓	$ 112,189
Surplus and Obsolete	489	511	1,000 ✓	-0-
Rework	1,271	-0-	1,271 ✓	-0-
Subcontract Cost - San Diego	70,184	15,072	85,256 ✓	103,852
- Fort Worth	-0-	-0-	-0-	-0-
Total Mfg. Material & S/C Costs	$ 184,807	$ 82,651	$ 267,458	$ 216,041
Program & Experimental Costs				
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ -0-	$ -0-	$ -0-	$ -0-
Cancellation Costs	-0-	20,691	20,691 ✓	-0-
Dev. Test & Experimental Material	88,011	2,799	90,810 ✓	269,589
Experimental Subcontract	55,627	373	56,000 ✓	-0-
tal Program & Experimental Costs	$ 143,638	$ 23,863	$ 167,501	$ 269,589
GRAND TOTAL	$ 328,445	$ 106,514	$ 434,959 ✓	$ 485,630

Prepared by Doris Parker

Approved by JL Richman
J. L. Richman
Chief of Material Cost & Budgets

GENERAL DYNAMICS/CONVAIR
CVR-43-0-14

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JUN 15 1962
PROJECT ANALYSIS SECTION

12 June 1962

DATE RECEIVED
JUN 15 1962
A. L. HENDRICKS

INDICATED COST REPORT CONTRACT AF33(600)40599 (MONTHLY)
AS OF 31 MAY 1962 - MANUFACTURING MATERIAL
(EXCLUDES SPARES EXCEPT AS NOTED)

Cost Category	Accumulated Costs Thru 5/31/62	Indicated Cost To Complete	Indicated Cost 5/31/62	Budget 5/31/62
Purchased Parts & Raw Material including Mfg. Usage Variance	$ 112,917	$ 67,014	$ 179,931	$ 112,189
Surplus and Obsolete	489	511	1,000	-0-
Rework	263	-0-	263	-0-
Subcontract Cost - San Diego	69,591	16,673	86,264	103,852
- Fort Worth	-0-	-0-	-0-	-0-
Total Mfg. Material & S/C Costs	$ 183,260	$ 84,198	$ 267,458	$ 216,041
Program & Experimental Costs				
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ -0-	$ -0-	$ -0-	$ -0-
Cancellation Costs	-0-	20,691	20,691	-0-
Dev. Test & Experimental Material	87,985	2,825	90,810	269,589
xperimental Subcontract	55,627	373	56,000	-0-
Total Program & Experimental Costs	$ 143,612	$ 23,889	$ 167,501	$ 269,589
GRAND TOTAL	$ 326,872	$ 108,087	$ 434,959	$ 485,630

repared by: Doris Parker

Approved by: J L Richman
J. L. Richman
Chief of Material Cost & Budgets

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APR 19 1962
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R Evans

GENERAL DYNAMICS/CONVAIR
CVR-43-0-14

16 April 1962

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APR 18 1962
DH
A. L. HENDRICKS

INDICATED COST REPORT CONTRACT AF33(600)40599 (MONTHLY)
AS OF 31 MARCH 1962 - MANUFACTURING MATERIAL
(EXCLUDES SPARES EXCEPT AS NOTED)

Cost Category	Accumulated Costs Thru 3/30/62	Indicated Cost To Complete	Indicated Cost 3-31-62	Budget 3-31-62
Purchased Parts & Raw Material Including Mfg. Usage Variance	$ 104,022	$ 71,909	$ 175,931	$ 112,189
Surplus and Obsolete	489	511	1,000	-0-
Rework	-0-	-0-	-0-	-0-
Subcontracted Cost - San Diego	69,690	6,837	76,527	103,852
- Fort Worth	-0-	-0-	-0-	-0-
Total Mfg. Material & S/C Costs	$ 174,201	$ 79,257	$ 253,458	$ 216,041

Program & Experimental Costs				
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ -0-	$ -0-	$ -0-	$ -0-
Cancellation Costs	-0-	20,691	20,691	-0-
y. Test & Experimental Material	87,743	13,067	100,810	269,589
Experimental Subcontract	55,627	4,373	60,000	-0-
Total Program & Experimental Costs	$ 143,370	$ 38,131	$ 181,501	$ 269,589
GRAND TOTAL	$ 317,571	$ 117,388	$ 434,959	$ 485,630

epared by: Doris Parker

Approved by: for
G. W. Zahrte
Procurement Manager

GENERAL DYNAMICS/CONVAIR
CVR-43-0-14

ECEIVED
MAR 16 1962
OJECT ANALYSIS SECTION

9 March 1962

LABOR FORECASTING
MAR 13 1962

INDICATED COST REPORT CONTRACT AF33(600)40599 (MONTHLY) AS OF 28 FEBRUARY 1962- MANUFACTURING MATERIAL (EXCLUDES SPARES EXCEPT AS NOTED)

Cost Category	Accumulated Costs Thru 2/28/62	Indicated Cost To Complete	Indicated Cost 2/28/62	Budget 2/28/62
Purchased Parts & Raw Material Including Mfg. Usage Variance	$ 89,412	$ 86,519	$ 175,931	$ 112,189
Surplus and Obsolete	489	511	1,000	-0-
Rework	-0-	-0-	-0-	-0-
Subcontracted Cost - San Diego	63,569	12,958	76,527	103,852
- Fort Worth	-0-	-0-	-0-	-0-
Total Mfg. Material & S/C Costs	$ 153,470	$ 99,988	$ 253,458	$ 216,041
Program & Experimental Costs				
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ -0-	$ -0-	$ -0-	$ -0-
Cancellation Costs	-0-	20,691	20,691	-0-
Dev. Test & Experimental Material	87,497	13,313	100,810	269,589
Experimental Subcontract	55,627	4,373	60,000	-0-
Total Program & Experimental Costs	$ 143,124	$ 38,377	$ 181,501	$ 269,589
GRAND TOTAL	$ 296,594	$ 138,365	$ 434,959	$ 485,630

Prepared by: Doris Parker

Approved by: for
C. M. Gauss, Jr.
Material Costs, Contracts & Services Manager

GENERAL DYNAMICS/CONVAIR
CVR43-0-14

19 February 1962

INDICATED COST REPORT CONTRACT AF33(600)40599 (MONTHLY) AS OF 31 JANUARY 1962- MANUFACTURING MATERIAL (EXCLUDES SPARES EXCEPT AS NOTED)

Cost Category	Accumulated Costs Thru 1-31-62	Indicated Cost To Complete	Indicated Cost 1-31-62	Budget 1-31-62
Purchased Parts & Raw Material Including Mfg. Usage Variance	$ 86,860	$ 89,071	$ 175,931	$ 112,189
Surplus and Obsolete	480	520	1,000	-0-
Rework	-0-	-0-	-0-	-0-
Subcontracted Cost - San Diego	56,336	20,191	76,527	103,852
- Fort Worth	-0-	-0-	-0-	-0-
Total Mfg. Material & S/C Costs	$ 143,676	$109,782	$ 253,458	$ 216,041
Program & Experimental Costs				
Vendors' Eng., Tooling & Development for Purchased Parts & Subcontract	$ -0-	$ -0-	$ -0-	$ -0-
Cancellation Costs	-0-	20,691	20,691	-0-
Dev. Test & Experimental Material	89,462	11,348	100,810	268,918
Experimental Subcontract	55,627	4,373	60,000	-0-
Total Program & Experimental Costs	$ 145,089	$ 36,412	$ 181,501	$ 268,918
GRAND TOTAL	$ 288,765	$146,194	$ 434,959	$ 484,959

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ESTIMATING DEPT.
FEB 21 1962
AM 7,8,9,10,11,12,1,2,3,4,5,6 PM

RECEIVED
FEB 26 1962
ROJECT AN
SECTION

epared by: Doris Parker

Approved by: for
C. M. Gauss, Jr.
Material/Costs, Contracts & Services Manager

CONVAIR – SAN DIEGO **AVOID VERBAL ORDERS**

TO R.D. EVANS DEPT 95-00 DATE 1-29-62

RECEIVED
JAN 29 1962
PROJECT ANALYSIS SECTION

SUBJECT: CONTRACT 40599; REQUEST FOR BUDGET

Ref (a) C.V. REPORT ZM 8-519 "Z", CPO 62-6-2

(b) Sales Order 1089-1-28 dtd. 16 Jan. 1962

In accordance with reference (a) as authorized by ref. (b) please provide Engineering budget as follows:

	DLH.	MATL'S ▲	INSTRUM. *	T&PD.
DEPT. 6 (Design & Tech.)	1480	$920	$110	$1086

Rec'd 2-1-62

*NOTES: The instrumentation referenced above consists of 2 pkgs. of strain gages and adhesives for same.

No [illegible] 1-30-62

▲ Materials budget excludes Photo Lab (Estimate is unavailable @ this time)

SIGNED	MAIL ZONE	DEPT. & FUNCT.	ROOM	COL/STA	FLOOR	BLDG	PLANT	PHONE
S. Menas	6120	6120						2670

FORM 1008-E (SHOW YOUR COMPLETE ADDRESS & PHONE)

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
INTERNAL CORRESPONDENCE
SAN DIEGO, CALIFORNIA

RECEIVED
JAN 29 1962
PROJECT ANALYSIS
SECTION

543C

DATE 25 January 1962

TO R. D. Evans

FROM L. E. Ottem

SUBJECT Contract AF33(600)-40599

Reference: (a) Cost Proposal Outline Serial No. 58-6-36 R1 Addendum I, dated 18 December 1961, "Cyclic and Fatigue Test Completion Program".

Engineering Department indicated total costs at completion of the subject contract were provided to you on Report Form 95-3 on 15 January 1962. The indicated costs were as of 31 December 1961 and had increased over the previous report. The increases are explained as follows:

1) The Fatigue Program Airplane 455 had encountered delays caused by major grounding orders and successive difficulties with instrumentation such as cross-talk, mis-matched pickups, deficient sub-carrier oscillators and drift. These were traced to defective instruments and also to the inability of the available instruments to produce the refined data required. Additionally, the Air Force Static Article Test Program at Dayton had been delayed due to difficulties in determining loads spectra originally and continuing revisions of the loads as requested by the Air Force. Other causes for program delays are noted in Paragraph 1.3 of reference (a).

2) In December, a conference was held with the Air Force at which time an acceptable plan for completing the Cyclic/Fatigue Program was negotiated. The plan to complete was substantially within the original intent and funds of this program. Cost estimates and work statement for the program to complete were submitted to the Estimating Department by reference (a).

3) The report submitted to you on 15 January 1962 was based on this revised plan to complete the Fatigue Program. By adjusting to an on-budget condition for the Fatigue Program only, the result was an increase for the total contract to complete.

The subject contract is of a development type which is inherently subjected to re-direction and re-definition of tasks. Your office is aware of the number of additional tasks which have been negotiated without increase to contract funds as well as the reductions made to original funding as a result of definitizing Supplemental Agreements Nos. 2 and 4. This contract has also had to absorb the costs for delays effected by grounding orders resulting from defective GFE.

To: R. D. Evans

25 January 1962

Additionally, there was no increase in budget to offset the cost of transporting and repairing certain of the defective GFE. Despite these situations the Engineering costs have been effectively controlled to the extent that no overrun is yet indicated for this contract.

Engineering will continue to administer the program with the intent of staying within budget. The underrun now indicated should be reserved for potential identification to other task increases which may occur on the development program remaining.

L. E. Ottem
Chief Project Engineer - Military

LEO:JFS:jk

cc: M. C. Curtis
J. F. Snyder
File

GENERAL DYNAMICS/CONVAIR
San Diego 12, California

RECEIVED
JAN 1[illegible] 1962
[illegible] SECTION

8 January 1962
11-1-326
GRV:sd

Subject: Contract AF33(600)-40599
F-106 Cyclic and Fatigue Test Program - Proposal for Revision of

To: Aeronautical Systems Division
Wright Patterson Air Force Base, Ohio

Attention: Mr. T. E. Grant - ASZDK

Reference: (a) Joint ASD/Convair Meeting at WPAFB on 8 December 1961

1. At Reference (a) meeting the following changes were made in the flight test task as described in Convair Report ZC-8-682 for subject F-106 Cyclic and Fatigue Test Program:

	Item Number	Revised Task
a.	Test Item I (Gust Load Tests)	Record and analyze at least 15 minutes of gust data at each test point. Record 30 minutes, if possible.
b.	Test Item II (Landing Impact Tests)	Eliminate Landing Test Items II-73 to II-80, and II-85 to II-108, and II-111, 112. Remaining items unchanged but GD/Convair will contact ASD before proceeding with Test Items II-109 thru II-148.
c.	Test Item III (Taxi & Braking Tests)	Reduce number of runs required to three for Test Item III-1 to III-14. Make 4 runs for Test Items III-5, 6 and III-13, 14 only if results indicate that it is necessary. Test Items III-15 to III-20 remain unchanged.
d.	Test Item IV (Turning Tests)	Reduce the number of turning cycles (as defined by the note on Page 19 of ZC-8-682) from five cycles to four cycles.
e.	Test Item V (Taxi Tests Over Obstacles)	Eliminate Test Items V-1 thru V-8 and V-13 thru V-16. Test Items V-9 thru V-12 remain unchanged.

	Item Number	Revised Task
f.	Test Item VI (Engine Run-up Tests)	Test Item VI-1 - Conduct two runs for quick look evaluation. Conduct the third run only if quick-look results indicate it is necessary. Test Item VI-2 - Conduct five runs. If results indicate no damage, the remaining five runs will be deleted.
g.	Test Item VII (Towing Tests)	No change

Schedule:

		Completion Date
Loads Spectra and Distributions		10-31-62
Operational Service Data (V-G-H) and Revised ADC Predicted Usage		2-14-62
Theoretical Fatigue Analysis		12-31-62
Structure Service Life		2-28-63
Component Tests	[illegible]	5-31-62
Full Scale Test	Dayton	12-31-62
Flight Test		
Testing Completed		5-31-62
Final Report Submitted		9-30-62

2. Accomplishment of the revised task, as described in paragraph 1 above, will result in no increase or decrease in the estimated cost and fixed fee of subject contract.

3. If the above changes in task and schedule are in accordance with your understanding, it is respectfully requested that these changes be reflected in a forthcoming amendment to subject contract.

4. At Reference (a) meeting Contractor was also advised that completion of the full scale F-106 static test being conducted by the Government in support of subject program might be delayed until 1 May 1963. This delay would require an extension in the Contractor's

full scale testing program from 31 December 1962 to 30 April 1963 and an extension in the structure service life test from 28 February 1963 to 30 June 1963. The area estimated cost for this schedule extension is $70,000 plus an increase in fee of $4,200, computed at six per cent (6%).

5. If this schedule becomes firm, Contractor will be pleased to submit its firm estimated cost upon your request.

GENERAL DYNAMICS CORPORATION

By: A. J. Reiser
Chief of Contract Administration
GD/Convair

cc: F-106 Proposal Distribution
-40S99 File

GENERAL DYNAMICS/CONVAIR

RECEIVED
FEB 27 1962
PROJECT ANALYSIS SECTION

X
Copy

23 February 1962
11-1-767

Subject: Contract AF33(600)-40599
F-106 Supersonic Escape System Sled Test

To: Aeronautical Systems Division
Wright-Patterson Air Force Base, Ohio

Attention: Mr. T. E. Grant - ASZDK

Via: San Diego Air Force Contract Management District
3054 Rosecrans Place
San Diego 10, California

Reference: (a) Convair letter 11-1-706 dated 13 February 1962
(b) Telecon Captain Zelton to W. D. Daniel on 16 February 1962

1. By Reference (a), Contractor submitted his proposal for additional supersonic escape system testing at an area estimated cost of $80,000 plus fee of $4,800. By Reference (b), Captain Zelton requested that three (3) articulated dummies be used in the performance of the aforementioned test. The additional cost, which will result from the use of the articulated dummies, is estimated to be $6,500 plus fee of $390 computed at 6%.

2. Contractor's statement of Work Report ZM-8-519Z is being revised to reflect the addition of the articulated dummies and copies of this report will be forwarded to you shortly.

GENERAL DYNAMICS CORPORATION

A. J. Reiser

By: A. J. Reiser
Chief of Contract Administration - GD/Convair

F-106 Proposal Distribution
cc: ECP 4049

GRV:mg

Z Ren

Contr 40599

Note CPO 58-6-9 Add III Pt 4
Received 1-12-62 to extend
program for 6 months from
6-30-62 thru 12-31-62
See CPO file
1/18/62 Est $98,032 cost

Rev 3-5-62
Note SO 1089-1-28 ~~1-16-62~~ authorizes
F-106A Supersonic Escape System Dev.
Rev 2M-8-5192 ✓
(SO com attached)
SO limits up to ~~$30,000~~ $55,000

Note CPO 62-2-3 – Personal Services
for Cyclic & Fatigue Static Testing
Est. Prop. 2-5-62
Cont. Le 11-1-58 2-8-62 {C $50,807 F $3,048
T $53,855

Rev 3-12
CPO 62-2-5 Personal Services for
Cyclic & Fatigue Static Testing (12 men)
Est Prop 3-16-62 – $103,657 ~~$115,731~~ cost

Recd - Grant
11-30-62

Att

AJC
3-7-62

R. Evans

GD/CONVAIR

SALES ORDER

Sold to: Aeronautical Systems Division
Wright-Patterson Air Force Base, Ohio

COPY

*Revised: 5 March 1962
Date: 16 January 1962

Contract: AF33(600)-40599

S. O. No: 1089-1-28

W. O. No: 527

F-106B Supersonic Escape System Development

1. This Sales Order authorizes the continued development of the F-106B Supersonic Escape System in accordance with Convair Statement of Work, Report No. ZM-8-519Z.

2. This Sales Order is limited to the expenditure of $XXXXX. *$55,000.

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MAR 8 - 1962
AM PM
7,8,9,10,11,12,1,2,3,4,5,6

GRV:sd

G. R. Vetter
for A. J. Reiser
Chief of Contract Administration

cc: ECP 4049
S. O. Book
Log No. ~~290~~ - 580

*Revised to amend para. 2.

Contract AF33(600)-40689 28862

CPO 61-6-31 ZM-8-519 Y — Supersonic

Escape System Sled Tests

SO 1089-1-27

ECN 2N-1178(16) Quote → $52,200

Contr Le 11-1-5650 12-11-61 Contr Le 1-11-62 11-1-3444

Conformed

Cost $55,424

FEE 1,499

$56,923

According to E.E. Jon 12-20-61 we will probably get no added quote or [illegible] for this. He advises not enter [illegible] unless the SA today [illegible] in added costs and/or fee

M EST

Entirely

FOR AMT

FILED IN SUPERSONIC SEAT FILE

Contract AF 33(600)-40599 Flight Test Extension

CPFF flight test extension follow-on to -30169.
Expected completion March 1962.

Probably no added items to quotation in that AMC is shifting future business of this nature to SAAMA. { Entered 8-31-61 CPO 61-6-20 COST - $146,870 in quote FEE - $8,812 Ⓡ

Similar to -30169, there is an SA in ~~process~~ Entered in quotation 8-31-61 covering a quotation reduction of $435,334 cost and $4,196 fee. Reference same A. J. Reiser memorandum dated 5-22-61. Schedule of items covered and reduction is prepared. Contingency for reduction has been built into management adjustment.

Hold this contract even (Ok'd with DCB) - do not disclose underrun until 30 days prior to anticipated 85% level of expenditure of quotation cost. Then consult with Art Reiser of Contracts as to advisable amount to disclose.

The report incorporates a management adjustment feature for holding the underrun. Limited distribution of the full report disclosing the adjustment.

-40594 continued

There is a pending form -3033 (Palmdale to Experimental) which may not materialize.

Indicated cost folder has labor, overtime, and burden work sheets. Indicated cost forms should be coming in from departments.

~~The Statement of Accumulated Costs does not reflect Palmdale activity. It is buried in Prod. Factory and Inspection. The Costs are in WO# 524 and #527. See July cumulative in Indicated Cost folder. Extract these costs from the Manufacturing & Inspection areas respectively and put in Palmdale area on budget report. Dick Knapp will set this up on the cost statement for August.~~

Note: Sales Order 1089-1-25 Rev'd 9-6-61 Requires compliance

① with CY Report ZM-8-519W $\wedge$ CPO 61-6-28 - added F-106B Sled Test at Edwards - Estimate Rec'd 9-20 $144,358 Cost (See Sec. of Super Sect. file) If AF to be changed, should it be entered in quote? ~~Follow up~~ Ⓡ NO FEE : NO ADDED BUDGET OR QUOTE

② CPO 61-6-15 Changed to CPO 58-6-9 Add Part IV Sales Order 1089-1-24 8-28-61 rec'd indicating ~~that~~ ECN 2N-531(14) covers this CPO and adds it to Contract 40599. (See attached note). Estimate is as following

Cost — $284,269.00
Fee 17,056.00
Price $301,325.00

Should this be entered in quotes? — See letter 11-1-3823 7-31-61 in CPO 58-6-9 file

Quotation fee (only) increased $17,056 9-30-61
No adjustment made to quote cost or budget Ⓡ

Fee of $17,056 deleted from quote 11-30-61 to agree with SA #4 Ⓡ

EW002-1168-1278

[illegible] after any figures are in and find out how much quoted fee, and then advise Runnion underrun.

CPO 61-6-15 ← {changed to 58-6-9 add Part IV

Made Part of Contr 40599

May become the basis of a new CPFE letter contract from SAAMA. Same set up as -14175 contract.

~~Bill Waring working on Proposal.~~

Ed Joos is Contracts man.

Proposal letter in file. Proposed under Contract - 40599

Note: Ref to Contr Ltr 8-18-61 #11-1-4151

CPO 61-6-15 - Flight Test Interceptor Improvement Program has been redesignated to read CPO 58-6-9 Addendum Part IV Revised 8-15-61

Sales order 1089-1-23 8-28-61, and - CCN 2N-531(14) 8-24-61 covers CPO 58-6-9 Add Part IV

MISCELLANEOUS

[illegible]

RECEIVED
JUN 1 1964
D. H. DIGGES

HEADQUARTERS
Aeronautical Systems Division
AIR FORCE SYSTEMS COMMAND
UNITED STATES AIR FORCE
WRIGHT-PATTERSON AIR FORCE BASE, OHIO 45433

REPLY TO ATTN. OF: ASCER

28 MAY 1964

SUBJECT: Historical Cost Study - F-102, F-106 (All Models)

TO: SDCMD (RWHDAA)
3054 Rosecrans Pl
San Diego Calif 92110

General Dynamics Convair
3302 Pacific Highway
San Diego Calif 92112
IN TURN

1. A project has been established to augment the data base from which improved evaluation of current and future cost estimates of the various major programs can be made. This is particularly important now and in the years to come where weapon system programs, with their increasing complexity, require such a large percentage of the military budget dollar.

2. Data formats reflecting our requirements for the augmentation of the data base are attached. On Friday, 5 June, a team of three or four people which includes representation from DOD, USAF, AFSC and ASD would like to meet with your personnel on-site to discuss the formats and provide any necessary clarification. Our target for completion of the forms is four weeks after this meeting.

3. No special funding is available for this project; however, it is anticipated that your historical records will permit the data extraction with a minimum of time and effort. The attached formats represent the ideal and may have to be modified in certain instances to reflect the kind of data contained in your records. In fact, it may be that your existing formats are satisfactory.

4. A letter, dated 21 May 1964, and signed by Gen Jones on this same matter was sent to General Dynamics, Fort Worth. It included the F-102 and F-106; however, since then it has been learned that all F-102/106 cost history data is located at the San Diego plant.

5. Our plans to visit San Diego on 5 June were discussed with Mr. B. J. Eldredge, SDCMD, by telephone on 27 May. Team members are as follows:

Miss Geraldine P. Ward, OASD - TOP SECRET CLEARANCE

Mr. Lloyd L. Hodges, USAF - TOP SECRET CLEARANCE

Mr. John J. Ambrose, ASD - SECRET CLEARANCE

EUGENE W. PHILLIPS
Colonel, USAF
Comptroller

1 Atch
Instr for the Use of the Formats Entitled "Actual & Estimated Costs on Contract" (3 cys)

1st Indorsement
Date 1 JUN 1964
San Diego CMD, San Diego, Calif. 92110
To: GD/CONVAIR ATTN: D. H. DIGGS
MZ 11-0

Forwarded.

AF Contracting Officer

Instructions for the Use of the Formats Entitled "Actual and Estimated Costs on Contract"

The set of formats entitled "Actual and Estimated Costs on Contract" prescribe the form of recording the costs for an aircraft program. A set is required for each contract. If more than one model is produced on one contract, a set is required for each model on the contract. The formats have been designed as an example of the development and subsystem tasks and cost element identification desired. Primary stress is placed on obtaining the actual costs for format pages 1, ~~2~~ 3, ~~4~~ 5, and ~~9~~ 10 for each contract in the detail shown. Definitions of the development and subsystem tasks are given in this paper. Any expansion of the subsystem or development tasks shown on the formats should be accompanied by a definition of the costs that will be recorded against it. It is recognized contractor accounting systems differ, therefore, it is requested that cost element definitions be provided by the contractor.

The cost formats reflect the data most urgently required. However, additional data such as indicated below is also desired.

1. Each system test task (listed on format page 4) cumulative expenditures over time related to milestones.
2. Cumulative total engineering hours and dollars by quarter for the life of the program.
3. Cumulative tooling hours and dollars by quarter for the life of the program.
4. Master production schedules.
5. History of major development and production problems
6. Delivery schedules for each contract. R+D +
7. Non-recurring costs of/major engineering changes.
8. Subsystem performance and weight characteristics.

Actual costs should be recorded for all closed contracts where

General Dynamics

aircraft deliveries have been completed, and the actual allowable costs are still being negotiated (and the cost yet to be incurred is relatively small). The contractor's estimated costs at completion submitted for final negotiation should be used for filling in these formats, but a statement on the format should indicate the status of the contract. For all contracts the "Total" column on formats pages 1, 6, 7, 8, 13, 14, 15, and 16 are to be filled. In addition there are formats that are to completed depending on the status of the contract. For closed contracts, "Actual Cost on Contract" formats, pages ~~2~~ 3, ~~4~~ 5, ~~9~~ 10 and ~~11~~ 12 are to be filled. For contracts still open for final negotiation the "Estimate at Completion" formats, pages 3, 5, 10 and 12 are to be filled.

It may take several subsidiary worksheets before one of these sets of formats can be filled in. These subsidiary worksheets are desired and should be kept with each set of formats as part of the package submitted. Each number can then be traced and will provide additional support in the use of this data.

The remaining discussion is concerned with the data to be inserted on each page in the set of formats and the definitions of the major tasks for which costs are to be collected. Questions concerning the definitions or cost elements should be forwarded to:

Summary (page 1):

The total contract cost data is to be shown on this format. This task breakdown is necessary for every contract.

Development, Air Vehicle

Design, Engineering Integration and Management (pages 2 & 3):

System Definition and Design

Preliminary design studies, including component requirement and specification determination, performance trade-off analysis, total system compatibility, etc.

Airframe, Basic Design

All initial engineering design work on the airframe. This may be considered as all engineering design and redesign that is identified specifically to airframe on an R&D contract.

Engineering Integration

Analysis, evaluation and solution of technical problems in manufacturing and development, detailed integration of all air vehicle subsystems, etc.

Management

Support to scientific, management and technical efforts to administer the program. This includes reliability, maintainability, quality engineering, Configuration, Control, PERT and PERT/Cost, Project Office, etc.

System Tests (page 4 & 5)

This category includes the conduct of tests for the entire weapon system, primarily flight test programs, and includes the following items: wind tunnel, fatigue test, static test, drop test, Cat. I flight test, Cat. II flight test, pre-flight test, and mockups and models (other than ETMA).

Wind Tunnel Models and Testing

Includes costs for (1) program plans for type and number of models required to obtain data necessary to determine configuration, (2) time to survey and arrange for use of wind tunnels, (3) design and prepare detail scale drawings and instrumentation requirements for each of the models, (4) fabrication models and instrumentation engineering, (5) reduce, analyze and interpret Wind Tunnel data.

Mock-Up and Models (excluding metal mock-up)

Costs for fabrication, tooling and engineering of basic and detail mock-ups.

Fatigue Drop and Static Articles and Tests

Demonstration of airframe structural integrity for static ultimate loads and cyclic fatigue/loading incurred during the service life of the aircraft. Costs include:

(1) Manufacture of test articles
(2) Preparation and installation of instrumentation
(3) Establishment of load spectra
(4) Determination of tests to be made
(5) Off-Site and in-plant support of tests
(6) Data interpretation, coordination, progress and final reports.
(7) Simulation of various sink speeds and aircraft landing configuration.

Flight Test

Category I - Include all costs for proofing aircraft design, engines, handling characteristics, airloads, gust load, plus various systems. The task consists of fabrication, installation, checkout, calibration and maintenance of instrumentation.

Category II - Category testing presents a plan, over and above Category I testing, for the continuation of development and operational tests, and for evaluation of the Weapons System by Service personnel with support from the contractor as required.

Other System Test

Costs are to be included for:

(1) Maintenance and flight of support aircraft

(2) Engine ground tests

(3) AGE Air Vehicle Integration

(4) Other miscellaneous tests

Subsystems (page 6)

Where the data are available, the development costs for each subsystem procured by the prime contractor should be listed. If the prime contractor's effort on a subsystem can be identified, this should also be listed.

Development, Peculiar AGE (page 7)

Where the data are available, the costs for Peculiar AGE development effort, on-site or off-site, should be listed.

Development, Personnel Subsystems (page 8):

Where the data are available, the costs for training equipment or aids development effort, on-site or off-site, should be listed.

Production, Air Vehicle (pages 9 & 10)

Airframe

This includes the hours and dollars for all of the airborne weapon systems related to the procurement of the assembled structual and aero-dynamic components that support subsystems integral in the flight vehicle. Examples of components and equipment to be considered airframe are fuselage, wing empennage, alighting gear, environmental control, purchased electrical equipment, mechanical equipment, hardware, raw materials, electrical wiring. Other manufacturing costs to be considered as such are major mating, tubing manufacture, painting, subsystem installation and maintenance, and final field and functional operation. Major subcontracts for any of the components or equipment listed in the above paragraph should be identified and shown as line items (Row 26 - 29). Other contractor divisions and other outside production should also be given. If any of the subcontract hours and dollars can be further identified as to engineering, tooling, and manufacturing effort, each should be shown on a format such as pages 11 and 12. It is specifically requested that all subcontracted engineering or tooling tasks and all other subcontract and outside production hours and dollars be shown on all formats.

Other Subsystems

All prime contractor effort which can be identified to subsystems and all purchased subsystems (line 32) should be shown in this column. The prime contractor's effort will include manufacturing of any subsystem, liaison required with subsystem suppliers, in-plant operation, and customer service. If data can be obtained in the cost element array shown on this format for a specific subsystem (such as a fire control system), a separate column should be used for the data. Examples of what should be considered as subsystems (other than airframe) are shown on the following page.

Production, Air Vehicle, Subsystem (page 13)

Where the data are available, all procured subsystems should be listed and quantity and total costs should be given. If the prime contractor's effort can be identified this should also be listed.

A Selected List of

Subsystems

Propulsion

- Engine
- Engine Accessories
- Other

Flight Control

- Flight Control System
- Air Data Computer
- Power Actuators

Mission and Traffic Control

- H. F. Radio
- LR Antenna Coupler
- AG/IFF
- Instrument Low Approach System
- Inter-comm.
- TACAN
- U. H. F. Comm.
- U. H. F. Direction Finder

Secondary Power

- Primary A. C. Power

Firepower Control

- Nav. & Attack
- TAC Radar
- TOWA
- Radar Altimeter
- MLC & OS

Armament

Reconnaissance

Defensive

Production, Peculair AGE (page 14)

All prime contractor procured or produced peculiar AGE should be identified by squadron or depot sets. If available the Handling, Servicing, and Checkout Equipment should be separately identified.

Production, Personnel Subsystems (page 15)

All prime contractor procured or produced training devices, accessories, aids, effort and parts used to facilitate instruction through which personnel acquire new concepts, skills and attitudes to enable them to perform assigned duties will be included. Where possible quality, or sets/base and costs should be identified for maintenance trainers, air crew trainers, etc.

Updating and Retrofit (page 16)

This format should list the task and modifications required to introduce test vehicles into the operational inventory and changes determined necessary during Category II testing and/or prior to the establishment of a standard system/equipment production configuration.

Data (shown only on Summary page 1)

This should include all engineering data and technical orders and manuals:

a. Engineering Data: Complete system associated with preparation of technical reports, logistics data, and hardware data, motion picture documentation, etc. This includes technical content for instructions to the manufacturing and flight departments.

b. Technical Orders and Manuals: All costs associated with technical documents which contain instructions and information concerning job performance of personnel engaged in operation, maintenance, service, overhaul, installation and inspection of specific items of weapon system equipment.

Spares (shown only on Summary page 1)

All procurement of Test + initial spares should be shown whether for the Air Vehicle, AGE, Training Equipment, etc. Where possible, identify spares procured for each major task.

Cost Form

Contractor:
Plant & Plant Location:
Contract No.:
Date as of Month:
Year:
Aircraft Type & Qty:

ACTUAL AND ESTIMATED COSTS ON CONTRACT (in thousands)
Task Description: Summary

Item	Actual Cost to Date	Estimated Cost to Completion	Total
Development			
Air Vehicle			
Peculiar AGE			
Personnel Subsystems			
Total Development Cost			
Production			
Air Vehicle			
Peculiar AGE			
Personnel Subsystems			
Spares			
Data			
Total Production Cost			
Other Identify			
TOTAL COST (less G&A)			
General & Administrative Expense (%)			
TOTAL CONTRACT COST			
PROFIT & LOSS (%)			
TOTAL CONTRACT PRICE			
REDETERMINED PRICE (If Applicable)			

Plant & Plant Location:
Contract No:
Date as of Month: Year:
Aircraft Type & Qty:

ESTIMATE AT COMPLETION OF CONTRACT (hours and dollars in thousands)
Task: Development-
Air Vehicle
Design, Engineering Integration, & Management

Row			System Definition and Design		Airframe, Basic Design		Engineering Integration		Management			
			Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Do
1	ENGINEERING:	Direct Labor										
2		Overhead										
3		Subcontr. Engr.										
4		Mtl. & Sp. Test Eq										
5		Other Direct Chgs.										
6		TOTAL										
7	TOOLING:	Direct Labor										
8		Plan & Design										
9		Mfg: Init. & Dup.										
10		Sustaining										
11		Plant Engineering										
12		Overhead										
13		Subcontr. Tooling										
14		Mtl. & Purch. Tool										
15		Other Direct Chgs.										
16		TOTAL										
17	QUAL. CONT.:	Direct Labor										
18		Overhead										
19		TOTAL										
20	MFG.:	Direct Labor										
21		Overhead										
22		Raw Mtl. & P. Pts.										
23		Other Direct Chgs.										
24		TOTAL										
25	OTHER PROCUREMENT											
26	Subcontr.-	Major										
27		1.________										
28		2.________										
29		3.________										
30		Other Contr. Divs.										
31		Other Outside Prod.										
32	Purchased Equipment											
33		TOTAL										
34	Material Overhead											
35	Other Items (Not Elsewhere Shn.)											
36	TOTAL COST (less G&A)											

3

Plant & Plant Location:
Contract No:
Date as of Month: Year:
Aircraft Type & Qty:

ESTIMATE AT COMPLETION OF CONTRACT (hours and dollars in thousands)
Task: Development-
Air Vehicle
System Test

Row		Wind Tunnel Models and Testing		Mockups (excl. ETMA)		Fatigue, Drop, Static Articles & Tests		Flight Test-Cat. I, II, & Navy		Other System Test	
		Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Doll
1	ENGINEERING: Direct Labor										
2	Overhead										
3	Subcontr. Engr.										
4	Mtl. & Sp. Test Eq										
5	Other Direct Chgs.										
6	TOTAL										
7	TOOLING: Direct Labor										
8	Plan & Design										
9	Mfg: Init. & Dup.										
10	Sustaining										
11	Plant Engineering										
12	Overhead										
13	Subcontr. Tooling										
14	Mtl. & Purch. Tool										
15	Other Direct Chgs.										
16	TOTAL										
17	QUAL. CONT.: Direct Labor										
18	Overhead										
19	TOTAL										
20	MFG.: Direct Labor										
21	Overhead										
22	Raw Mtl. & P. Pts.										
23	Other Direct Chgs.										
24	TOTAL										
25	OTHER PROCUREMENT										
26	Subcontr.- Major										
27	1.______										
28	2.______										
29	3.______										
30	Other Contr. Divs.										
31	Other Outside Prod.										
32	Purchased Equipment										
33	TOTAL										
34	Material Overhead										
35	Other Items (Not Elsewhere Shn.)										
36	TOTAL COST (less G&A)										

5

Cost Format.

Plant & Plant Location:
Contract No.:
Date as of Month:
Year:

Aircraft Type & Qty:

ACTUAL AND ESTIMATED COSTS ON CONTRACT (in thousands)
Task Description: Development
Air Vehicle
Subsystem

Item	Supplier (If Applicable)	Actual Cost to Date	Estimated Cost to Completion	Total

Cost ormal

ntractor:
ant & Plant Location:
ntract No.:
te as of Month:
Year:

rcraft Type & Qty:

ACTUAL AND ESTIMATED COSTS ON CONTRACT (in thousands)

Task Description: Development
Peculiar AGE

Item	Supplier (If Applicable)	Actual Cost to Date	Estimated Cost to Completion	Total

Cost rmat

ent & Plant Location:
ntract No.:
te as of Month:
Year:

rcraft Type & Qty:

ACTUAL AND ESTIMATED COSTS ON CONTRACT (in thousands)
Task Description: Development
Personnel Subsystems

Item	Supplier (If Applicable)	Actual Cost to Date	Estimated Cost to Completion	Total

8

Contract No:
Date as of Month: Year:
Aircraft Type & Qty:

Task: Pro[illegible]ction-
Air Vehicle

Row			Airframe		Other Subsystems		Total Air Vehicle					
			Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	D[illegible]lars	Hours	Dol
1	ENGINEERING:	Direct Labor										
2		Overhead										
3		Subcontr. Engr.										
4		Mtl. & Sp. Test Eq										
5		Other Direct Chgs.										
6		TOTAL										
7	TOOLING:	Direct Labor										
8		Plan & Design										
9		Mfg: Init. & Dup.										
10		Sustaining										
11		Plant Engineering										
12		Overhead										
13		Subcontr. Tooling										
14		Mtl. & Purch. Tool										
15		Other Direct Chgs.										
16		TOTAL										
17	QUAL. CONT.:	Direct Labor										
18		Overhead										
19		TOTAL										
20	MFG.:	Direct Labor										
21		Overhead										
22		Raw Mtl. & P. Pts.										
23		Other Direct Chgs.										
24		TOTAL										
25	OTHER PROCUREMENT											
26	Subcontr.-	Major										
27		1.______										
28		2.______										
29		3.______										
30		Other Contr. Divs.										
31		Other Outside Prod										
32	Purchased Equipment											
33		TOTAL										
34	Material Overhead											
35	Other Items(Not Elsewhere Shn.)											
36	TOTAL COST (less G&A)											

10

Plant & Plant Location:
Contract No:
Date as of Month: Year:
Aircraft Type & Qty:

ESTIMATE AT COMPLETION OF CONTRACT (hours and dollars in thousands)
Task: Production-
Air Vehicle
Subcontractors

Row		Airframe		Other Subsystems		Total Air Vehicle					
		Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dol
1	ENGINEERING: Direct Labor										
2	Overhead										
3	Subcontr. Engr.										
4	Mtl. & Sp. Test Eq										
5	Other Direct Chgs.										
6	TOTAL										
7	TOOLING: Direct Labor										
8	Plan & Design										
9	Mfg: Init. & Dup.										
10	Sustaining										
11	Plant Engineering										
12	Overhead										
13	Subcontr. Tooling										
14	Mtl. & Purch. Tool										
15	Other Direct Chgs.										
16	TOTAL										
17	QUAL. CONT.: Direct Labor										
18	Overhead										
19	TOTAL										
20	MFG.: Direct Labor										
21	Overhead										
22	Raw Mtl. & P. Pts.										
23	Other Direct Chgs.										
24	TOTAL										
25	OTHER PROCUREMENT										
26	Subcontr.- Major										
27	1.________										
28	2.________										
29	3.________										
30	Other Contr. Divs.										
31	Other Outside Prod.										
32	Purchased Equipment										
33	TOTAL										
34	Material Overhead										
35	Other Items (Not Elsewhere Shn.)										
36	TOTAL COST (less G&A)										

/2

Contractor:
Plant & Pl Location:
Contract No.:
Date as of Month:
Year:

Aircraft Type & Qty:

Cost

ACTUAL AND ESTIMATED COSTS ON CONTRACT (in thousands)
Task Description: Production
Air Vehicle
Subsystem

Item	Supplier (if applicable)	Prod. Lead Time	Actual Cost to Date		Estimate to Completion		Total	
			Qty. or Sets Del.	Dollars	Qty. or Sets Del.	Dollars	Qty. or Sets Del.	Doll

Cost Form

Plant & Plant Location:
Contract No.
Date as of Month:
Year:

Aircraft Type & Qty:

ACTUAL AND ESTIMATED COSTS ON CONTRACT (in thousands)
Task Description: Production
Peculiar AGE

Item	Supplier (if applicable)	Prod. Lead Time	Actual Cost to Date		Estimate to Completion		Total	
			Qty. or Sets Del.	Dollars	Qty. or Sets Del.	Dollars	Qty. or Sets Del.	Dol

[illegible] Plant Location:
Contract No..
Date as of Month:
Year:

Aircraft Type & Qty:

ACTUAL AND ESTIMATED COSTS ON CONTRACT (in thousands)
Task Description: Production
Personnel Subsystems

Item	Supplier (if applicable)	Prod. Lead Time	Actual Cost to Date		Estimate to Completion		Total	
			Qty. or Sets Del.	Dollars	Qty. or Sets Del.	Dollars	Qty. or Sets Del.	Dol

15

& Plant Location:
ract No.:
as of Month:
Year:

Aircraft Type & Qty:

ACTUAL AND ESTIMATED COSTS ON CONTRACT (in thousands)
Task Description: Production-
Up Dating or Retrofit

Item Description of Modification	Actual Cost to Date	Estimated Cost to Completion	Total

GENERAL DYNAMICS/CONVA

Evans

RECEIVED
MAR 6 1963
PROJECT ANALYSIS
SECTION

2 March 1963

MEMO TO: C. L. Meador, General Dynamics/New York Office

FROM: D. H. Digges

SUBJECT: F-102/F-106 Cost and Profit History

Attached is a separate sheet for each of the F-102/F-106 contracts, summarizing the cost and profit history.

An overrun of $34,423,161 (16 per cent of the total cost) was experienced under F-102 Contract AF33(600)-5942 and $42,303,301 (12.8 per cent of the total cost) under F-106 Contract AF33(600)-30169. During the early phase of the program, rate variances were a substantial factor, contributing an estimated increase of $11,600,000 in the cost of Contract -5942. Both of these programs were also conducted during a period of time when a concerted and continuous effort was being made by both the Government and Convair to accelerate the development and delivery of the F-102 and F-106 Weapons Systems. Concurrent with the acceleration of the program, both the Government and Convair made a maximum effort to press all known improvements to completion to achieve the most advanced weapons systems possible in consonance with the urgent operational requirements for an all-weather interceptor. These twin efforts resulted in expansion of the flight test program, additional wind tunnel testing, heavy off-station incorporation of improvements, substantial rework of vendor and in-plant parts and associated tooling rework, and vendor cancellation charges. As the development phase progressed, late receipt of major Government-furnished aircraft equipment, such as pilot seat ballistics, fire control system components, and communication and navigation equipment, added further to the heavy off-station costs required for installation. Although the off-station incorporation of these improvements added substantially to the cost during the early phase of the program, considerable savings resulted in eliminating later field and depot level retrofit programs.

The underrun experienced on the F-102/F-106 production contracts ranged from $1,086,170, or 0.7 per cent of the target cost under Contract AF33(600)-33808, to $15,155,661, or 11 per cent of the target cost under Contract AF33(600)-29264. These underruns were attributable largely to:

A. Substantial freezing of the airplane configuration with a resulting reduction in off-station work and the attendant increase in "learning" and factory realization.

B. Management efforts to impose stringent cost controls, consonant with the Air Force goal of obtaining the most effective weapons systems for the funds expended.

C. Increased production rates with resulting savings in volume material procurement and increased manufacturing efficiency.

S. R. Vetter
D. H. Digges
Director of Contracts

cc: D. H. Digges
A. J. Chitten
R. D. Evans
A. L. Hendricks
J. J. Jodka
F-102/F-106 Files - 9

R. L. Evans

RECEIVED
JUN 19 1962
PROJECT ANALYSIS SECTION

GENERAL DYNAMICS/CONVAIR

18 June 1962

TO:
W. R. Bruce/E. H. Damarus/J. L. Richman
F. S. Chambers/A. J. Reiser
G. A. Covington/G. E. Briggs
M. C. Curtis/G. L. Peyton/K. C. Cummins
C. M. Gauss/J. E. Miller
R. K. Gottschall/H. R. Kennedy/H. L. Montgomery
O. W. Harper/R. E. Sommers/J. Doig/J. L. Carton/S. D. Berling
J. B. Henn/A. L. Baber
J. D. Milling/J. J. Jodka/H. E. Wall
C. L. Polsley/J. C. Reed
E. J. Shannon/W. B. Harwell
W. W. Whittier/W. Minando
W. E. Wise/R. D. Marks/C. A. Ives/V. Sharp/D. M. Weisinger

FROM: H. B. Rogers

SUBJECT: Final Price Redetermination of Model 8 - Contracts AF33(600)33808, AF33(600)34814 and AF33(600)36546 - Estimated Costs to Complete

REFERENCE: Division Estimating (H. B. Rogers) memo requesting costs to complete dated 1 March 1961.

Division Estimating has been requested to prepare brochures covering costs to complete for the subject contracts, using the latest cost to complete data to be supplied by your departments.

By this memo, Division Estimating requests that each department review their remaining tasks and anticipated costs in regard to the completion of these contracts and submit the estimated costs to complete to Division Estimating as follows:

(a) Contract AF33(600)33808 - Due in Estimating 1 July 1962
(b) Contract AF 33(600)34814 -Due in Estimating 15 July 1962
(c) Contract AF33(600)36546 - Due in Estimating 1 August 1962

This request updates the task identified in the referenced memo.

Consideration should be given to the following items:

(a) Costs to complete should cover the period from 1 June 1962 to completion. Actual costs to 1 June 1962 will be obtained from Accounting.

(b) All Airplanes, Spares and Ground Support Equipment have been delivered on Contracts AF33(600)33808 and AF33(600)34814.

(c) Airplane deliveries have been completed on Contract AF33(600)36546, however, Spares and Ground Support Equipment items are being audited to determine the status of incomplete requirements.

(d) Replacement of Spares, if any, borrowed for production.

(e) Qualification of Airplanes, Spares and Ground Support Equipment.

(f) Tool Storage program for Contract AF33(600)36546.

Your estimates should identify the costs to complete by:

(a) Contract
(b) Airplane Model - F-106A or F-106B
(c) Spares
(d) Ground Support Equipment
(e) Tool Preservation, Maintenance and Storage

General Accounting is hereby requested to prepare and submit schedules identifying property taxes and sales taxes charged to these contracts.

Customer Service-Service Parts is hereby requested to prepare and submit to Division Estimating (Spares Section) schedules for each contract either identifying Spares and Ground Support Equipment to be processed and delivered or statements affirming complete delivery of all Spares and Ground Support Equipment against the completed contracts. Also required is a list, by contract, identifying items requiring qualification or statements for each contract stating that all Spares and Ground Support Equipment items have been qualified.

Division Estimating (Spares Section) is hereby requested to provide contract targets for Spares and Ground Support Equipment identified by contract and showing costs, profit and total prices for:

(a) Airforce approved exhibits
(b) Exhibits submitted but still to be approved by the Airforce
(c) Estimated costs, profit and prices of items to be submitted in subsequent exhibits
(d) Cost to complete all Spares and Ground Support Equipment

The Material Department's task in regard to costs to complete for these contracts can be withheld pending the results of current audits of materials, etc. for all F-106 Contracts. It is suggested, however, that the Material Department maintain current lists of all items on procurement that will not be subject to this audit so that cost to complete figures will be immediately available upon completion of the audit.

In summary:

(a) All costs to complete must be supported by manpower spreads and substantiating data as contract requirements must be completely documented.

(b) Contract AF33(600)36546 is the last F-106 Contract to which legitimate costs can be identified.

(c) Open commitments for purchased and subcontracted items should be identified with part numbers, vendor names, purchase orders, etc.

(d) Cancellation claims should be identified with part numbers, purchase order numbers, cancellation docket numbers, original price and estimated value of each purchase order at settlement.

Any questions regarding the subject task should be referred to R. E. Fetterly (Division Estimating), Extension 2341.

HB Rogers
H. B. Rogers
Chief of Division Estimating

HBR:bs

GENERAL DYNAMICS/CONVAIR

ACCOUNT 131 and CAP INVENTORIES & ADJUSTMENTS - 30 April 1962
BASED ON MATERIAL DEPARTMENT I.V.S LETTER - 10 May 1962

RECEIVED
MAY 14 1962
PROJECT ANALYSIS SECTION

CONTRACT	MODEL	PERCENT		IDENTIFIED	ALLOCATED	RESERVE	NET INVENTORY
CAP INVENTORIES:							
-37169	F-106	54.5		20 491	1 954		22 445
-11229	F-106 Test to The.	25.8		9 695	925		10 620
-40069		11.7		4 383	419		4 802
Astro-As 1st Launcher Misc.		8.0		3 035	287		3 322
CAP Total		100.0	2	37 604	3 585		41 189
DIVISION ACCT. 131:							
-33778	F-106	.1		12 325	2 112	<193 435>	<178 998>
-34814	F-106	.1		11 980	2 112	<30 258>	<16 166>
-36646	F-106	.6		95 377	12 674	<1 535 751>	<1 427 700>
Military Service Kits		3.9		656 512	82 379	-	738 891
North American		-		1 013	-	-	1 013
Lockheed		-		45	-		45
Jet Transport 22		11.5		1 916 653	242 914	<2 174 132>	<14 565>
Jet Transport 22M		5.7		950 641	120 401		1 071 042
Jet Transport 30		72.5		12 118 578	1 531 413	<13 258 572>	391 419
Jet Transp. Drag Redtn.		1.0		162 094	21 123		183 217
Jet Transp. Ord. Flt Test		.9		143 798	19 011		162 809
Jet Transport (Speculative)		3.7		627 630	78 155		705 785
Jet Transp. (Corona 131-40)		-		-0-	59 905		59 905
Boeing		-		5 443	-		5 443
Acct. 131 Identified		100.0	99.8	16 702 089	2 172 199	<17 192 148>	1 682 140
Total CAP and 131 Ident.			100.0	16 739 693			
Standard Inventory - OSP & R.M.				1 792 311	<1 792 311>		
Total per IVS Ltr 5/10/62				18 532 004			
Deduct CAP Inventory				<37 604>			
Deduct Group 17				<25 846>	25 846		
INVENTORY ADJUST. 131-88 & -89 Unprocessed Requisitions				<302>	302		
Reserves - S&O 131-78 & -79				<17 192 148>		17 192 148	
Rework (Vendor & In-Plant)				796 119	<796 119>		
131-40 Corona				59 905	<59 905>		
Unaccounted for				<446 403>	446 403		
Add back from CAP							3 585
TOTAL PER SCHEDULE 3				1 685 725	-0-	-0-	1 685 725

SOURCE ... IVS ...
5/14/62

COST TO COMPLETE STATUS MODEL 8 CONTRACTS
12-31-61

	CONTRACT	ACTUAL EXPENDITURES CURRENT MONTH	CUMULATIVE TO DATE	COST TO COMPLETE	INDICATED 11-30-61 COST	TOTAL COST QUOTE	AT COMPLETION (OVER)/UNDER QUOTE
	31 174	30 386	338 547 823	254 982	338 802 805	333 939 125	‹4 863 608›
	33 685	547	68 428 643	57 227	68 485 870	72 685 364	4 199 494
CPFF	30 169	‹248 170›	284 055 814	900 272	284 956 086	239 146 077	‹45 810 009›
	33 808	183 867	135 169 496	1 047 749	136 217 245	137 218 647	1 001 402
	34 814	9 038	42 051 025	824 846	42 875 871	50 849 012	8 023 141
	36 546	219 467	151 420 811	3 292 441	154 713 252	185 104 857	30 391 605

MPLETION /UNDER OTE		ANALYSIS - COST TO COMPLETE				
	L-O-B	MATERIALS + OTHER ENG	 FACTORY		TOTAL	REMARKS
3608 >	—		—			No change
494	—		—			No change
009 >	—		1518 00			
402	—		4951 82			
3141	—		754 99			
605	8050 00		16463 85			Use 11-30-61 DETAIL REPORT

INDICATED COST ~~AT~~ to COMPLETION

CONTRACT 31546 AS OF DEC 31 1961

		DIRECT LABOR			OVERTIME		BURDEN			
Department		Hours	Rate	Amount	Rate	Amount		Hours	Rate	Amount
ENG										
Actuals to Estimate	62	7108	4.91	34900	07	498			611	43430
Estimate										
Estimate										
Total										
Serv. Parts										
Actuals to Estimate	62	1547	3.86	5971	—	—			611	9452
Estimate										
Estimate										
Total										
Serv Eng										
Actuals to Estimate	62	3360	3.86	12,970		—			1.83	6149
Estimate										
Estimate										
Total										
TOOL ENG										
Actuals to Estimate	62	20960	3.59	75246	01	210			519	108,782
Estimate										
Estimate										
Total										
TOTL MFG										
Actuals to Estimate		20,448	3.22	65,843	01	204			519	106,125
Estimate										
Estimate										
Total										

Page 2 of 2

INDICATED COST ~~AT~~ to COMPLETION

CONTRACT 21571 AS OF DEC 31 1961

Department		DIRECT LABOR Hours	DIRECT LABOR Rate	DIRECT LABOR Amount	OVERTIME Rate	OVERTIME Amount		BURDEN Hours	BURDEN Rate	BURDEN Amount
PROD										
Actuals to										
Estimate	62	1,500	274	4110	—	—			519	7785
Estimate										
Estimate										
Total										
PL ENG										
Actuals to										
Estimate	62	30984	3.22	99,768	01	310			519	160,807
Estimate										
Estimate										
Total										
INSP										
Actuals to										
Estimate	62	1,504	300	4512	01	15			519	7806
Estimate										
Estimate										
Total										
SAMP										
Actuals to										
Estimate	62	4712	2.71	12,770		—			519	24455
Estimate										
Estimate										
Total										
GA										
Actuals to										
Estimate							62	92123	15	13818
Estimate										
Estimate										
Total - L-O B		92 128		316 090		1237		92123		488,609

TOTAL L + O + B = 805,936 use 805,000

COST TO COMPLETE STATUS MODEL 8 CONTRACTS

10-31-61

CONTRACT NO 10-31-61	ACTUAL COSTS 10-31-61	INDICATED COST 10-31-61	INDICATE COST TO COMPLETE 10-31-61	COST BURDEN ADJ	TO COMP MATERIA ENG DEPT
31 174	338 520 076	338 802 805	282 729	—	
33 695	68 427 357	68 485 870	58 513	—	
30 169	284 332 528	284 956 086	623 558	4 808	207 368
33 808	134 987 331	136 217 245	1 229 914	461	2 101
34 814	42 040 947	42 875 871	834 964	2 401	1 400
36 546	150 961 899	157 211 032	6 249 133	60 925	73 284

11-30-61

30 169

33 808

34 814

36 546

MPLETE – RECALCULATED					NOV-1961	IN PUT		
RIAL	& OTHER		SUB		AMOUNT	HOURS		
EPT	MATERIAL	EPT	TOTAL		(NET)			
					< 2639 >			
					739			
8	220 247		432 423		< 28 544 >	198		
	193 416		195 978		< 1702 >	667		
0	84 935		88 736		1040	443		
4	2351 810		2486 019		239 445	14 889	3417	TOOL CLEARANCE
	165 937							
	686 640							
	80 909							
	2 211 372							

RECEIVED
FEB 23 1962
PROJECT ANALYSIS
SECTION

Revised *23 February 1962
21 February 1962

R. G. Macomber/K. H. Bruner

B. J. Wood

Surplus and Obsolete Reserves -
Inactive Contracts

1) Material Control Department reports no inventory on hand in Stores for the following completed contracts, for which there are balances remaining in Account 131-68 as of 31 December 1961:

Model	Contract	Acct. 131-68 Bal.	S & O Work Order
440	Commercial	$ 25,323.91	3768
F-102	-23903	11,423.39	20068*
F-102	-29264	(56,945.90)	20068*
F-102	-31174	28,231.75	18068
F-102	-33695	(89,954.86)	20068
	Total	$ (81,921.71)	

2) Process journal entries in February 1962 to:

*a. Transfer the above balances to contract Work Orders as listed in 1) above. Note that this will result in transferring reserve balances in redetermined contracts -23903 and -29264 to contract -33695 (W.O. 20068), in accord with the final price redetermination negotiations.

b. Reverse entries in January 1962 J.E. 34 affecting Account 131-68 in behalf of contracts as listed in 1) above.

3) In the future, when preparing J.E. 34, do not transfer transactions in Work Orders listed in 1) above to Account 131-68.

4) Revise the format of the Surplus and Obsolete Report for 31 January 1962 and on to include the following programs:

Surplus and Obsolete Reserves -
Inactive Contracts

23 February 1962

4) cont'd.

Model	Contract	Work Orders Surplus	 Obsolete
F-106	-33808	19068	19068
F-106	-34814	21068	21068
F-106	-36546	27068	27067
880	Commercial	(30068	30067
		(30168	30167
990	Commercial	(31068	31067
		(31918	31917
**990	Drag Program	34068	34067

Note: * denotes revision; **indicates addition.

BJWood

B. J. WOOD
Accounting Department
Cost Accounting Section

BJW:vmi

cc: R. D. Evans
C. M. Gauss
J. J. Jodka
R. H. Lange
J. D. Milling

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FEB 22 1962
PROJECT ANALYSIS
SECTION

21 February 1962

R. G. Macomber/K. H. Bruner

B. J. Wood

Surplus and Obsolete Reserves -
Inactive Contracts

1) Material Control Department reports no inventory on hand in Stores for the following completed contracts, for which there are balances remaining in Account 131-68 as of 31 December 1961:

Model	Contract	Account 131-68 Bal.	S & O Work Order
440	Commercial	$ 25,323.91	3768
F-102	-23903	11,423.39	15680
F-102	-29264	(56,945.90)	16068
F-102	-31174	28,231.75	18068
F-102	-33695	(89,954.86)	20068
	Total	$ (81,921.71)	

2) Process journal entries in February 1962 to:

a. Transfer the above balances from Account 131-68 to the appropriate contract Work Orders.

b. Reverse entries in January 1962 J.E. 34 affecting Account 131-68 in behalf of contracts listed in 1) above.

3) In the future, when preparing J.E. 34, do not transfer transactions in Work Orders listed in 1) above to Account 131-68.

4) Revise the format of the Surplus and Obsolete Report for 31 January 1962 and on to include the following programs:

		Work Orders	
Model	Contract	Surplus	Obsolete
F-106	-33808	19068	19068
F-106	-34814	21068	21068
F-106	-36546	27068	27067

Surplus and Obsolete Reserves -
Inactive Contracts

21 February 1962

Model	Contract	Work Orders	
		Surplus	Obsolete
880	Commercial	30068	30067
		30168	30167
990	Commercial	31068	31067
		31918	31917

BJWood
B. J. WOOD
Accounting Department
Cost Accounting Section

BJW:vmi

cc: ✓R. D. Evans
C. M. Gauss
J. J. Jodka
R. H. Lange
J. D. Milling

GENERAL DYNAMICS/CONVAIR

Date: 7 August 1961

To: A. L. Hendricks

From: W. W. Hass

Subject: October 1961 Financial Forecast

1.0 In accordance with the procedure and due dates established in the Internal Financial Forecasting Procedures (General Office Publication) dated 30 January 1959 this division is to furnish profit rates, sales prices, and accounting adjustments to be included in the October 1961 Financial Forecast by 21 August 1961.

2.0 In order that we may comply with this procedure, we request that your department furnish the following information to this office as soon as possible, but in no event later than 8:00 a.m. 17 August 1961:

a. Comments on "near future" and ultimate changes to the 30 June 1961 Project Budget Reports (indicated costs, sales, and profits) on Contracts AF33(600)-30169, AF33(600)-31174, AF33(600)-33695, AF33(600)-33808, AF33(600)-34814, and AF33(600)-36546.

b. Anticipated fee rates on future R & D and Miscellaneous CPFF contracts.

W. W. Hass

WWH:ah
cc: R. E. Evans

1 March 1961

TO
E. L. Armi/B. R. Swarts
R. E. Bechtol/W. F. Van Dusen
W. R. Bruce/C. M. Gauss/K. M. Johnson
G. A. Covington
C. G. Glasgow/A. J. Reiser
O. W. Harper/H. R. Kennedy/L. J. Bordelon/R. E. Sommers
J. B. Henn/A. L. Baber/O. P. Stockton/M. B. Fuhrmann
W. G. Kemmer
W. J. Martin/F. J. Parker
L. Moore/R. M. Frost
C. L. Polsley/J. C. Reed
H. A. Smith/E. W. Manning
W. P. Woods/G. F. Lasy

FROM H. B. Rogers

SUBJECT Final Price Redetermination of Model 8 - Contracts AF 33(600)-33808, AF 33(600)-34814 and AF 33(600)-36546

REFERENCE
(a) Memo C. G. Glasgow to A. L. Hendricks dated 15 February 1961
(b) Memo C. G. Glasgow to A. L. Hendricks dated 18 January 1961
(c) AMC letter LMDC/P-4-1/Capt. Muterspaw dated 11 January 1961

1. In order for Convair-San Diego to furnish AMC with the final price of aircraft, spare parts, special tools, ground support equipment, training parts and equipment, mobile training units, etc. on the subject contracts it is necessary that each department conduct a thorough review and then report to Division Estimating the anticipated expenditures, if any, that will be required to complete all items and activity for the period 1 March 1961 through to completion of the total task.

2. Estimated man hours, materials, and other costs are to be submitted separately for each of the subject contracts in the usual fashion together with distributions of manpower and complete supporting data. Consideration should be given to the following items.

(a) Replacement of spare parts, if any, borrowed for the aircraft production programs

(b) Fabrication and installation of shop shortage items

(c) Rework

(d) Contract AF 33(600)-36546 is the last production contract for F-106 airplanes. Therefore this is the last oppertunity to recover legitimate cost for these models

3. Every item of actual cost and estimated cost will be audited and reviewed by the Air Force auditors and cost analysts. Therefore, it is essential that all departments support their estimates of costs and manpower with descriptive back-up information and data in minute detail. In this connection AMC has requested that we include with the final proposal (broken down by major elements) the variations between the initial targets and the final estimated costs along with a brief analysis of any conditions which contributed to these variations.

4. By copy of this memo the Contracts Department is requested to set up a meeting to include those departments whose tasks include the qualification, modification, rework and/or replacement of Contractor furnished equipment (CFE). This meeting will be held to ascertain Convair-San Diego's financial liability in connection with unqualified items as they pertain to each of the subject contracts.

5. The attached lists of ECP's are the additive changes identified to the contracts and for the models shown, subsequent to the basic negotiated configurations listed below.

Contract AF 33(600)-33808

(a) Fifty four (54) F-106A airplanes to Contractor's Specification ZD-8-005 dated 1 March 1955, revised 1 July 1955 and addendum thereto dated 1 March 1955 and revised 15 December 1955 (Serial Numbers AF 57-2453 through AF 57-2506)

(b) Thirty four (34) F-106B airplanes to Contractor's Specification ZD-8-110 dated 1 October 1956 (Serial Numbers AF 57-2514 through AF 57-2547)

Contract AF 33(600)-34814

(a) Forty (40) F-106A airplanes to Contractor's Specification ZD-8-005B dated 1 March 1957 (Serial Numbers AF 58-759 through AF 58-798)

(b) Five (5) F-106B airplanes to Contractor's Specification ZD-8-110 dated 1 October 1956 and revised 15 December 1956 (Serial Numbers AF 58-900 through AF 58-904)

Contract AF 33(600)-36546

(a) One hundred forty eight (148) F-106A airplanes to Contractor's Specification ZD-8-005D dated 15 May 1958 (Serial Numbers 59-001 through 59-148)

(b) Seventeen (17) F-106B airplanes to Contractor's Specification ZD-8-110A dated 15 May 1958 (Serial Numbers 59-149 through 59-165)

6. It is necessary that all departmental estimates and supporting data or statements to the effect that no future task is anticipated, be submitted to Division Estimating on or before 20 March 1961 in order that we may meet the schedule dates for final price redetermination.

7. In summary all actual costs incurred and estimated costs to complete will be carefully screened by the Government agencies, therefore, it is of extreme importance that substantiating data, used to determine the costs to complete, prove beyond reasonable doubt that these costs will be incurred, bearing in mind that all airplanes have been delivered. For example:

(a) Open Commitments - for purchased and subcontracted items should be identified with part numbers, vendor names, purchase order numbers, etc.

(b) Cancellation Claims - should be identified with part numbers, purchase order numbers, cancellation docket numbers, original price on the purchase order and estimated value of each purchase order at settlement.

Any remaining task will be subject to disallowance unless contractual requirements can be demonstrated.

8. Since Contract AF 33(600)-36546 appears to be the last of the F-106 contracts, special attention is called to the plant clearance task required for preserving and maintaining such tooling as may be directed by the government. Any Tooling and Plant Engineering expenditures pertaining to plant clearance should be separately identified and supported, as separate negotiations for additional funds under this contract may be necessary in as much as the present contract target costs do not include this item.

Any questions regarding the subject task should be referred to R. E. Fetterly (Division Estimating) Extension #2341.

H B Rogers
H. B. Rogers
Supervisor of Estimating

HBR:REF:ka

cc: J. M. Sponagle

CONTRACT AF 33(600)-33808

ADDITIVE ECP'S AFTER NEGOTIATED SPEC. CONFIGURATION

F-106A's

4018R1
4031R2
4036
4040R2
4042R2
4048
4049
4054
4055
4057
4058
4060
4064
4065
4067
4068
4073
4074R1
4074R2
4075
4077
4079
4081
4082
4083
4084
4086
4090
4091
4092
4093
4094
4097
4098
4099
4099R1
4101
4101R1
4102
4104

4105
4106
4111
4112
4113
4114
4115
4117
4117R1
4117R2
4118
4119
4124R1
4127
4128
4131R1
4131R2
4132R1
4137
4140
4140R1
4141
4141R1
4142
4143
4144R1
4144R2
4145
4149
4153
4154
4157
4163
4163R1
4167
4167R1
4168
4170
4172
4174R1

4175
4176R1
4179
4180
4181
4182
4183
4184
4185
4190R1
4193
4194
4195
4196
4197R1
4198
4200
4202
4203
4204
4205
4211
4215
4217
4220
4222
4223
4224
4241
4242
4246
4249
4256
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4262
4263
4267
4268
4278
4284

4286
4293
4299
4304
4320
4328
4331
4343
4344
4345
4351
4366
4376
4377
4390R1
4394
4396
4400
4417
4422
4434
4445
4463
4485

F-106B's

4040R2
4042R2
4049
4053
4054
4056
4057
4060
4064
4065
4067
4068
4073
4074R1
4074R2
4075
4077
4078
4081
4084
4085
4086
4087
4090
4091
4092
4093
4094
4097
4099
4099R1
4101R1
4102
4104R2
4105
4106
4107
4111
4112
4114

4115
4117
4117R1
4117R2
4118
4119
4124R1
4127
4131R1
4132R1
4140
4140R1
4141
4141R1
4142
4143
4144R1
4144R2
4145
4148
4153
4154
4163
4163R1
4167
4167R1
4170
4172
4174R1
4176R1
4178
4179
4180
4181
4182
4188
4190R1
4192
4197R1
4201

4202
4203
4204
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4207
4212
4213
4214R1
4215
4216
4217
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4230
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4255
4256
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4267
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4287
4299
4319
4319R1
4319R2
4320
4321
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4379
4390R1
4394
4396
4400
4403
4404
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4434
4445
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4466
4467
4485
4491

CONTRACT AF 33(600)-3.814

ADDITIVE ECP'S AFTER NEGOTIATED SPEC. CONFIGURATION

F-106A's

4074R2
4106
4112
4131R1
4140
4140R1
4141
4141R1
4174R1
4181
4190R1
4196
4197R1
4198
4198R1
4202
4203
4204
4205
4207
4211
4213
4214R1
4215
4217
4220
4222
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4293
4299
4319
4319R1
4319R2
4328
4331
4333
4334
4340
4343
4344
4345
4351
4358
4366
4376
4377
4379
4390R1
4400
4403
4404
4422
4434
4445
4463
4485

F-106B's

4074R2
4104R2
4106
4112
4131R1
4140
4140R1
4141
4141R1
4174R1
4176R1
4181
4190R1
4196
4197R1
4198
4198R1
4201
4202
4203
4204
4205
4207
4213
4214R1
4215
4216
4217
4220
4222
4223
4224
4226
4230
4241
4242
4246
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4251
4255

4256
4258
4261
4262
4263
4267
4268
4271
4278
4287
4293
4299
4319
4319R1
4319R2
4321
4328
4331
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4341
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4350
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4376
4377
4379
4388
4390R1
4400
4403
4422

4434
4445
4455
4463
4466
4467
4485
4491

CONTRACT AF 33(600)-36546

ADDITIVE ECP'S AFTER NEGOTIATED SPEC. CONFIGURATION

F-106A's

4049
4049R1
4140R1
4140R2
4176R1
4190R1
4196
4203
4214R1
4215
4216
4219R1
4225R1
4225R2
4229
4233
4242
4246
4251
4257
4260
4261
4265
4268
4272R1
4282
4287
4293
4296
4299
4312
4319
4319R1
4319R2
4328
4330
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4379
4386
4388
4390R1
4400
4403
4415
4418
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4425
4431
4432R1
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4435
4436
4440
4442
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4446
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4451
4454
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4466
4467
4485
4504
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4510

F-106B's

4049
4049R1
4140R1
4176R1
4190R1
4196
4203
4214R1
4215
4216
4225R1
4225R2
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4510

STATEMENT OF ACCOUN[illegible] COSTS
CONTRACT AF 33(600) [illegible] 74
JANUARY 31, 1956

PAGE IV OF IV

	TOTAL PROJECT COSTS		SPARES 18739 - 18787		SPECIAL T[illegible] G.H.[illegible]
	8-10	8-12	8-10	8-12	8-10
PRODUCTION FLIGHT			85.33%	14.67%	
DIRECT LABOR HOURS	3406	794			
DIRECT LABOR COSTS	146295	34093			
OVERTIME [illegible]	1504	350			
OVERHEAD	340837	79430			
TOTAL	488636	113873			
DIVISION COSTS	26814368	3026870	46478	7989	
ACCUMULATED [illegible]	41093	5139	85	15	
G.O. OVERHEAD	324967	-49646	2058	314	
TOTAL PROJECT COSTS	27180428	3081655	48621	8318	
TOTAL HOURS			1126	194	

TORS AND	ACTUAL PROJECT COSTS		18000-49-31-039-66		TOOLING 18440	18259 18001
8-12	8-10	8-12	8-10	8-12	8-10	8-10
			85.33%	14.67%		
	3406	794				
	146295	34093				
	1504	350				
	340837	79430				
	488636	113873				
	26767890	3018881	6329674	1088200	✓ ⟨2444⟩	✓ 1440128
	41008	5124				
	322909	49332				
	27131807	3073337	6329674	1088200	⟨2444⟩	1440128
			✓ 73950	✓ 12713		✓ 15035

ENGINEERING 18902-18907		EXCESS USAGE 18068		PLANT ENGINEERING 18480		1802	
8-10 81.1%	8-12 18.9%	8-10 81.1%	8-12 18.9%	8-10 81.1%	8-12 18.9%	8-10 93.31%	8-12 6.69%
2021983 ✓	435713 ✓	29861 ✓	6959 ✓	4391 ✓	1025 ✓	124 ✓	
2021983	435713	29861	6959	4391	1025	124	
30501 ✓	7107 ✓			97 ✓	23 ✓	3 ✓	

[illegible] 18480		1802		1803		MG-3 PROGRAM 18650-18651	
	8-12	8-10	8-12	8-10	8-12	8-10	8-12
%	18.9%	93.31%	6.69%	79.08%	20.92%	81.1%	18.9%
						3406	794
						146295	34093
						1504	350
						340837	79430
						488636	113873
✓ 91	✓ 1025	✓ 124		✓ 333		7238970	✓ 1486984
91	1025	124		333		7238970	1486984
✓ 7	✓ 23	✓ 3		✓ 8		107920	13318

STATEMENT OF ACCOUNTING COSTS
CONTRACT AF 33(600) 31174
JANUARY 31, 1956

PAGE III OF IV

	TOTAL PROJECT COSTS		SPARES 18739-18787		SPECIAL
	8-10	8-12	8-10	8-12	8-10
MANUFACTURING			85.33%	14.67%	
DIRECT LABOR HOURS	113307	11645			
DIRECT LABOR COSTS	2124305	367632			
OVERTIME PREMIUM	10472	1362			
OVERHEAD	2451109	419500			
RAW MAT'L. AND PUR. PARTS	2342256	306205			
VENDOR AND PROGRAM COSTS	378695	65105			
SUBCONTRACT COSTS	115945	19933			
OTHER COSTS	1817083	352915			
FORT WORTH ACTIVITIES	9668568				
TOTAL	18908433	1532652			
INSPECTION					
DIRECT LABOR HOURS	15917	2963			
DIRECT LABOR COSTS	346388	65617			
OVERTIME PREMIUM	235311	40455			
OVERHEAD	137438	29118			
TOTAL	719137	135190			
SHIPPING					
DIRECT LABOR HOURS	299	51	34	6	
DIRECT LABOR COSTS	5473	941	626	108	
OVERTIME PREMIUM					
OVERHEAD	6722	1155	799	137	
MATERIAL AND OTHER					
TOTAL	12195	2096	1425	245	
PALMDALE					
DIRECT LABOR HOURS	40663	9327			
DIRECT LABOR COSTS	985184	226526			
OVERTIME PREMIUM	17347	4043			
OVERHEAD	1973406	459894			
OTHER COSTS	20214	4711			
TOTAL	2996151	695174			
HOLLOMAN A.F.B.					
DIRECT LABOR HOURS	5067	1181			
DIRECT LABOR COSTS	166766	38864			
OVERTIME PREMIUM					
OVERHEAD	198273	46207			
OTHER COSTS					
TOTAL	365039	85071			

TOOLS AND E.	ACTUAL PROJECT COSTS		18000-049-031-039-66 TOOLING		18440	18259 18001
8-12	8-10	8-12	8-10	8-12	8-10	8-10
			85.337.	14.672		
	113307	11645	63487	1091.5		11910
	2124305	367632	1211336	208254		228886
	10472	1362	7249	1246		2727
	2451109	419500	1422664	244585		277660
	2342256	306205	1781081	306205		561175
	378695	65105	378695	65105		
	115945	19933	115945	19933		
	1817083	352915	962126	165409		50370
	9668568 18908433	1532652	5879096	1010737		1120878
	15917	2963	10198	1753		525
	346388	65617	204497	35157		11102
	235311	40455	235311	40455		
	137438	29118				12394
	719137	135190	439808	75612		23496
	265	45	265	45		
	4847	833	4847	833		
	5923	1018	5923	1018		
	10770	1851	10770	1851		
	40663	9327				640
	985184	226526				13162
	17347	4043				
	1973406	459894				
	20214	4711				
	2996151	695174				13162
	5067	1181				
	166766	38864				
	198273	46207				
	365039 *	85071 *				

(* TO ENGINEERING TOTAL)

ENGINEERING- 18902-18907		EXCESS USAGE 18068		PLANT ENGINEERING 18480		1802	
8-10	8-12	8-10	8-12	8-10	8-12	8-10	8-12
81.1%	18.9%	81.1%	18.9%	81.1%	18.9%	93.31%	6.69%
						3	
						57	
						67	
		29861	6959				
		29861	6959			124	
3							
64							
73							
137							

	ENGINEERING 18480	1802		1803		MG-3 PROGRAM 18650 — 18651	
	8-12	8-10	8-12	8-10	8-12	810	8-12
%	18.9%	93.31%	6.69%	79.08%	20.92%	81.1%	18.9%
		3		7		37900	730
		57		133		683893	159378
						496	116
		67		157		750561	174915
						774726	180547
		124		290		2209676	514956
				1		5190	1210
				20		130705	30460
				23		124948	29118
				43		255653	59578
						″	
						40023	9327
						972022	226526
						17347	4043
						1973406	459894
						20214	4711
						2982989	695174
						5067	1181
						166766	38864
						198273	46207
						365039	85071

STATEMENT OF ACCOUNTING COSTS
CONTRACT AF 33(600) 31174
JANUARY 31, 1956

	TOTAL PROJECT COSTS		SPARES 18739-18787		SPECIAL G
	8-10	8-12	8-10	8-12	8-10
TOOLING			85.33%	14.67%	
TOOL ENGINEERING					
DIRECT LABOR HOURS	1092	188	1092	188	
DIRECT LABOR COSTS	26095	4486	26095	4486	
OVERTIME PREMIUM					
OVERHEAD	18958	3258	18958	3258	
FORT WORTH ACTIVITY	573				
TOTAL	45626	7744	45053	7744	
TOOL MANUFACTURING					
DIRECT LABOR HOURS					
DIRECT LABOR COSTS					
OVERTIME PREMIUM					
OVERHEAD					
RAW MATL. AND PUR. PARTS	⟨2444⟩				
SUBCONTRACT COSTS					
OTHER COSTS					
FORT WORTH ACTIVITY	5287				
TOTAL	2843				
PLANT ENGINEERING					
DIRECT LABOR HOURS	97	23			
DIRECT LABOR COSTS	1809	421			
OVERTIME PREMIUM	178	40			
OVERHEAD	2404	564			
TOTAL	4391	1025			
TOTAL TOOLING	52860	8769	45053	7744	

IAL TOOLS AND G.H.E.		ACTUAL PROJECT COSTS		18000-049-031-039-066		TOOLING 18440	18259 18001
10	8-12	8-10	8-12	8-10	8-12	8-10	F102A
				85.33%	14.67%		
		573					
		573					
		⟨2444⟩				⟨2444⟩	
		5287					
		2843				⟨2444⟩	
		97	23				
		1809	421				
		178	40				
		2404	564				
		4391	1025				
		7807	1025				⟨2444⟩	

IAL TOOLS AND ACTUAL PROJECT 18000-049-031-039-066 TOOLING

ENGINEERING 18902 - 18907		EXCESS USAGE 18068		PLANT ENGINEERG. 18480		1802	
8-10	8-12	8-10	8-12	8-10	8-12	8-10	8-12
81.1%	18.9%	81.1%	18.9%	81.1%	18.9%	93.31%	6.69%
				97	23		
				1809	421		
				178	40		
				2404	564		
				4391	1025		
				4391	1025		

ENGINEERG.		1802		1803		MG-3. PROGRAM	
18480						18650	18651
0	8-12	8-10	8-12	8-10	8-12	8-10	8-12
%	18.9%	93.31%	6.69%	79.08%	20.92%	81.1%	18.9%
1	23						
09	421						
78	40						
04	564						
91	1025						
91	1025						

STATEMENT OF ACCOUNTING COSTS
CONTRACT AF 33(600) 31174
JANUARY 31, 1956

PAGE I OF IV

	TOTAL PROJECT COSTS		SPARES 18739-18787		SPECIAL TOOLS G.H.E.	
	8-10	8-12	8-10	8-12	8-10	8
ENGINEERING			85.33%	14.67%		
DESIGN AND LIASON						
DIRECT LABOR HOURS	46832	7183				
DIRECT LABOR COSTS	1397688	224871				
OVERTIME PREMIUM	73332	11022				
OVERHEAD	1141235	174972				
SUBCONTRACT COSTS						
MATERIAL AND OTHER COSTS	330279	39384				
FORT WORTH ACTIVITY	30442					
TOTALS	2972976	450249				
SERVICE PUBLICATIONS						
DIRECT LABOR HOURS						
DIRECT LABOR COSTS						
OVERTIME PREMIUM						
OVERHEAD						
TOTALS						
EXPERIMENTAL FACTORY						
DIRECT LABOR HOURS						
DIRECT LABOR COSTS						
OVERTIME PREMIUM						
OVERHEAD						
MATERIAL AND OTHER COSTS						
TOTALS						
WIND TUNNEL						
OCCUPANCY HOURS						
DIRECT LABOR HOURS						
DIRECT LABOR COSTS						
OVERTIME PREMIUM						
OVERHEAD						
MATERIAL AND OTHER COSTS						
TOTALS						
EDWARDS A.F.B.						
DIRECT LABOR HOURS	1960					
DIRECT LABOR COST	44361					
OVERTIME PREMIUM	920					
OVERHEAD	63613					
MATERIAL AND OTHER COSTS	190047	3796				
TOTALS	298941	454045				
TOTAL ENGINEERING	3271917	454045				

AL TOOLS AND G.H.E.		ACTUAL PROJECT COSTS		18000-049-031-039 -066		TOOLING 18440	18259 18001
10	8-12	8-10	8-12	8-10	8-12	8-10	8-10
				85.33%	14.67%		
		46832	7183				
		1397688	224871				
		73332	11022				
		1141235	174972				
		330279	39384				
		30442					
		2972976	450249				
		1960					1960
		44361					44361
		920					920
		63613					63613
		190047	3796				173758
		298941	3796				282652
		3271917	454045				282652

ENGINEERING 18902-189[illegible]		EXCESS [illegible] 18068		PLANT ENGINEERING 18480		1802	
8-10	8-12	8-10	8-12	8-10	8-12	8-10	8-12
81.1%	18.9%	81.1%	18.9%	81.1%	18.9%	93.31%	6.69%
30498	7107						
950875	221598						
47295	11022						
742971	173146						
264416	26151						
2005557	431917						
16289	3796						
16289	3796						
2021846	435713						

T ENGINEERING 18480		1802		1803		MG-3 PROGRAM 18650 – ^{18911} 18651	
10	8-12	8-10	8-12	8-10	8-12	8-10	8-12
1%	18.9%	93.31%	6.69%	79.08%	20.92%	81.1%	18.9%
						16334	76
						446813	3273
						26037	
						398264	1826
						65863	13233
						936977	18332
						936977	18332

CONTROL ACCOUNTS FO AF 33(600) 31174

WORK ORDER SERIES	TOTAL AMOUNT	TOTAL HOURS
✓18000	5378592	77251
✓18001	513703	12035
✓18002	124	3
✓18003	333	8
✓18031	5303	120
✓18039	1203459	310
✓18049	386720	8982
✓18066	443800	
✓18068	36820	
✓18259	926425	3000
✓18440	<2444>	
✓18480	5416	120
✓18610	6470	
✓18650	6511300	93553
✓18651	1349875	11675
✓18739	1670	40
✓18787	52797	1280
✓18902	2170060	37608
✓18907	287636	
✓18911	858309	16010
	20136368	261995

TRIAL BALANCES:

54467	SPARES
20081901	
9704870	FORT WORT ACTIVITY
29841238	TOTAL

EYE-EASE NO 5407
BUFF NO 3407

STATEMENT OF ACCU

131 TF-102A AIRPLANES - CONTR

29 February

	Total TF-102A Costs	Spares	Spec. Tools and Ground Hndlg.Equip.	Actual TF-102A Proj.Costs	131 TF-102A Costs
ENGINEERING					
DESIGN AND LIAISON					
Direct Labor Hours	718 3			718 3	710 7
Direct Labor Costs	2248 71			2248 71	2215 98
Overtime Premium	110 22			110 22	110 22
Overhead	1749 72			1749 72	1731 46
Subcontract Costs					
Material & Other Costs	393 84			393 84	261 51
Fort Worth Activity					
Total	4502 49			4502 49	4319 17
SERVICE PUBLICATIONS					
Direct Labor Hours					
Direct Labor Costs					
Overtime Premium					
Overhead					
Subcontract Costs					
Material & Other Costs					
Total					
EXPERIMENTAL FACTORY					
Direct Labor Hours					
Direct Labor Costs					
Overtime Premium					
Overhead					
Subcontract Costs					
Material & Other Costs					
Fort Worth Activity					
Total					
WIND TUNNEL					
Occupancy Hours					
Direct Labor Hours					
Direct Labor Costs					
Overtime Premium					
Overhead					
Subcontract Costs					
Material & Other Costs					
Total					

ATED COSTS

T AF 33(600) - 31174

56 9/12 [illegible]

MG-3 Program Costs
76
32 73
18 26
132 33
183 32

STATEMENT OF ACCU[illegible]TED COSTS

131 TF-102A AIRPLANES-CONTRACT AF 33(600) - 31174

29 February 1956

	Total TF-102A Costs	Spares	Spec. Tools and Ground Hndlg.Equip.	Actual TF-102A Proj. Costs	131 TF - 102A Costs	MG-3 Program Costs
EDWARDS						
Direct Labor Hours						
Direct Labor Costs						
Overtime Premium						
Overhead						
Other Costs	37 96			37 96	37 96	
Total	37 96			37 96	37 96	
HOLLOMAN						
Direct Labor Hours	118 1			118 1		118 1
Direct Labor Costs	388 64			388 64		388 64
Overtime Premium						
Overhead	462 07			462 07		462 07
Other Costs						
Total	850 71			850 71		850 71
TOTAL ENGINEERING	5391 16			5391 16	4357 13	1034 03

STATEMENT OF ACCUMULATED COSTS

131 TF-102A AIRPLANES - CONTRACT AF 33(600) - 31174

29 February 1956

	Total TF-102A Costs	Spares	Spec.Tools and Ground Hndlg.Equip.Proj.	Actual TF-102A Costs	131 TF-102A Costs	MG-3 Program Costs
TOOLING						
TOOL ENGINEERING						
Direct Labor Hours	188	188				
Direct Labor Costs	4486	4486				
Overtime Premium						
Overhead	3258	3258				
Subcontract Costs						
Fort Worth Activity						
Total	7744	7744				
TOOL MANUFACTURING						
Direct Labor Hours						
Direct Labor Costs						
Overtime Premium						
Overhead						
Raw Mat'l & Pur. Parts						
Subcontract Costs						
Other Costs						
Fort Worth Activity						
Total						
PLANT ENGINEERING						
Direct Labor Hours	23			23	23	
Direct Labor Costs	421			421	421	
Overtime Premium	40			40	40	
Overhead	564			564	564	
Material & Other Costs						
Total	1025			1025	1025	
TOTAL TOOLING	8769	7744		1025	1025	

STATEMENT OF ACCUM

131 TF-120A AIRPLANES - CONTRA

29 February

	Total TF-102A Costs	Spares	Spec.Tools and Ground Hndlg.Equip.	Actual TF-102A Proj.Costs	131 TF-102A Costs
MANUFACTURING					
Direct Labor Hours	11645			11645	10915
Direct Labor Costs	367632			367632	208254
Overtime Premium	1362			1362	1246
Overhead	419500			419500	244585
Raw Mat'l & Pur. Parts	306205			306205	306205
Subcontract Costs	19933			19933	19933
Excess Usage					
Surplus & Obsolete					
Freight					
Rework					
Program Costs	65105			65105	65105
Cancellation Costs					
Other Costs	352915			352915	172368
S. D. Assist to Fort Worth					
Fort Worth Activity					
Total Manufacturing	1532652			1532652	1017696
SHIPPING					
Direct Labor Hours	51	6		45	45
Direct Labor Costs	941	108		833	833
Overtime Premium					
Overhead	1155	137		1018	1018
Material & Other Costs					
Total Shipping	2096	245		1851	1851
PRODUCTION FLIGHT					
Direct Labor Hours	794			794	
Direct Labor Costs	34093			34093	
Overtime Premium	350			350	
Overhead	79430			79430	
Other Costs					
Total Production Flight	113873			113873	
PALMDALE					
Direct Labor Hours	9327			9327	
Direct Labor Costs	226526			226526	
Overtime Premium	4043			4043	
Overhead	459894			459894	
Other Costs	4711			4711	
Total Palmdale	695174			695174	

ENT OF ACC[illegible]LATED COSTS

ANES - CONTRACT AF 33(600) -31174

29 February 1956

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131 TF-102A Costs	MG-3 Program Costs
10915	730
208254	159378
1246	116
244585	174915
306205	
19933	
65105	
172368	180547
1017696	514956
45	
833	
1018	
1851	
	794
	34093
	350
	79430
	113873
	9327
	226526
	4043
	459894
	4711
	695174

STATEMENT OF ACC

131 TF-102A AIRPLANES - CONTRA

29 February 1

	Total TF-102A Costs	Spares	Spec.Tools and Ground Hndlg.Equip.	Actual TF-102A Proj.Costs	131 TF-102A Costs
INSPECTION					
Direct Labor Hours	2963			2963	1753
Direct Labor Costs	65617			65617	35157
Overtime Premium	40455			40455	40455
Overhead	29118			29118	
Material					
Total Inspection	135190			135190	75612
Division Costs	3026870	7989		3018881	1531897
Accelerated Amortization	5139	15		5124	5124
G. O. Overhead	49646	314		49332	49332
Total Project Costs	3081655	8318		3073337	1586353
TOTAL HOURS	33355	194		33161	19843

Cost Accounting Department
Works Accounting Section
AF Plant 19 Ext. 564
Report No. 4-17
9 March 1956

Distribution:
- Acker, D. B.
- Blakely, J. S.
- Burrows, D. C.
- Higgins, A. P.
- Hills, P. N.
- Jodka, J. J.
- Johnson, E. E.
- McManus, R. H.
- Moseley, M. F.
- Osborn, R. G.
- Pederson, R. C.
- Wood, B. J.

ENT OF ACC ATED COSTS

ANES - CONTRACT AF 33(600) -31174

29 February 1956

131 TF-102A Costs	MG-3 Program Costs
1753	1210
35157	30460
40455	
	29118
75612	59578
1531897	1486984
5124	
49332	
1586353	1486984
19843	13318

B.
J. S.
D. C.
A. P.
N.
J.
E. E.
R. H.
M. F.
. G.
R. C.
J.

280-14

STATEMENT OF ACCUMU

562 F-102A AIRPLANES - CONTRAC

29 February 1

	Total F-102A Costs	Spares	Spec. Tools and Ground Hndlg. Equip	Actual F-102A Proj. Costs	562 F-102A Costs
ENGINEERING					
DESIGN AND LIAISON					
Direct Labor Hours	46832			46832	30498
Direct Labor Costs	13 976 88			13 976 88	9 508 75
Overtime Premium	733 32			733 32	472 95
Overhead	11 412 35			11 412 35	7 429 71
Subcontract Costs					
Material & Other Costs	3 302 79			3 302 79	2 644 16
Fort Worth Activity	304 42			304 42	304 42
Total	29 729 76			29 729 76	20 359 99
SERVICE PUBLICATIONS					
Direct Labor Hours					
Direct Labor Costs					
Overtime Premium					
Overhead					
Subcontract Costs					
Material & Other Costs					
Total					
EXPERIMENTAL FACTORY					
Direct Labor Hours					
Direct Labor Costs					
Overtime Premium					
Overhead					
Subcontract Costs					
Material & Other Costs					
Fort Worth Activity					
Total					
WIND TUNNEL					
Occupancy Hours					
Direct Labor Hours					
Direct Labor Costs					
Overtime Premium					
Overhead					
Subcontract Costs					
Material & Other Costs					
Total					

NT OF ACCUMULATED COSTS

ES - CONTRACT AF 33(600) - 31174

9 February 1956 5/B JAN 56

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562 F-102A Costs	MG-3 Program Costs
3049 8	1633 4
9508 75	4468 13
472 95	260 37
7429 71	3982 64
2644 16	658 63
304 42	
20 359 99	9369 77

STATEMENT OF ACCUMULATED COSTS

562 F-102A AIRPLANES - CONTRACT AF 33(600) - 31174

29 February 1956

	Total F-102A Costs	Spares	Spec. Tools and Ground Hndlg.Equip.	Actual F-102A Proj. Costs	562 F - 102A Costs	MG-3 Program Costs
EDWARDS						
Direct Labor Hours	196 0			196 0	196 0	
Direct Labor Costs	443 61			443 61	443 61	
Overtime Premium	9 20			9 20	9 20	
Overhead	636 13			636 13	636 13	
Other Costs	1900 47			1900 47	1900 47	
Total	2989 41			2989 41	2989 41	
HOLLOMAN						
Direct Labor Hours	506 7			506 7		506 7
Direct Labor Costs	1667 66			1667 66		1667 66
Overtime Premium						
Overhead	1982 73			1982 73		1982 73
Other Costs						
Total	3650 39			3650 39		3650 39
TOTAL ENGINEERING	36369 56			36369 56	23349 40	13020 16

STATEMENT OF ACCUMULATED COSTS

562 F-102A AIRPLANES - CONTRACT AF 33(600) - 31174

29 February 1956

	Total F-102A Costs	Spares	Spec.Tools and Ground Hndlg.Equip.	Actual F-102A Proj.Costs	562 F - 102A Costs	MG-3 Program Costs	
TOOLING							
TOOL ENGINEERING							
Direct Labor Hours	1029	1029					
Direct Labor Costs	26095	26095					
Overtime Premium							
Overhead	18958	18958					
Subcontract Costs							
Fort Worth Activity	573			573	573		
Total	45626	45053		573	573		
TOOL MANUFACTURING							
Direct Labor Hours							
Direct Labor Costs							
Overtime Premium							
Overhead							
Raw Mat'l & Pur. Parts	<2444>			<2444>	<2444>		
Subcontract Costs							
Other Costs							
Fort Worth Activity	5287			5287	5287		
Total	2843			2843	2843		
PLANT ENGINEERING							
Direct Labor Hours	97			97	97		
Direct Labor Costs	1809			1809	1809		
Overtime Premium	178			178	178		
Overhead	2404			2404	2404		
Material & Other Costs							
Total	4391			4391	4391		
TOTAL TOOLING	52860	45053		7807	7807		

STATEMENT OF ACCUMU

562 F-102A AIRPLANES - CONTRAC

29 February

	Total F-102A Costs	Spares	Spec.Tools and Ground Hndlg.Equip.	Actual F-102A Proj.Costs	562 F-102A Costs
MANUFACTURING					
Direct Labor Hours	113307			113307	75407
Direct Labor Costs	21243 05			21243 05	14404 12
Overtime Premium	104 72			104 72	99 76
Overhead	24511 09			24511 09	17005 48
Raw Mat'l & Pur.Parts	23422 56			23422 56	23422 56
Subcontract Costs	1159 45			1159 45	1159 45
Excess Usage					
Surplus & Obsolete					
Freight					
Rework					
Program Costs	3786 95			3786 95	3786 95
Cancellation Costs					
Other Costs	18170 83			18170 83	10423 57
S. D. Assist to Fort Worth					
Fort Worth Activity	96685 68			96685 68	96685 68
Total Manufacturing	189084 33			189084 33	166987 57
SHIPPING					
Direct Labor Hours	299	34		265	265
Direct Labor Costs	54 73	6 26		48 47	48 47
Overtime Premium					
Overhead	67 22	7 99		59 23	59 23
Material & Other Costs					
Total Shipping	121 95	14 25		107 70	107 70
PRODUCTION FLIGHT					
Direct Labor Hours	3406			3406	
Direct Labor Costs	1462 95			1462 95	
Overtime Premium	15 04			15 04	
Overhead	3408 37			3408 37	
Other Costs					
Total Production Flight	4886 36			4886 36	
PALMDALE					
Direct Labor Hours	40663			40663	640
Direct Labor Costs	9851 84			9851 84	131 62
Overtime Premium	173 47			173 47	
Overhead	19734 06			19734 06	
Other Costs	202 14			202 14	
Total Palmdale	29961 51			29961 51	131 62

MENT OF ACCUMULATED COSTS

PLANES - CONTRACT AF 33(600) - 31174

29 February 1956

562 F-102A Costs	MG-3 Program Costs
754 07	3790 0
14404 12	6838 93
99 76	4 96
17005 48	7505 61
23422 56	
1159 45	
3786 95	
10423 57	7747 26
96685 68	
166987 57	22096 76
26 5	
48 47	
59 23	
107 70	
	340 6
	1462 95
	15 04
	3408 37
	4886 36
64 0	4002 3
131 62	9720 22
	173 47
	19734 06
	202 14
131 62	29829 89

STATEMENT OF ACCUMU

562 F-102A AIRPLANES - CONTRAC

29 February

	Total F-102A Costs	Spares	Spec.Tools and Ground Hndlg.Equip.	Actual F-102A Proj.Costs	562 F-102A Costs
INSPECTION					
Direct Labor Hours	15917			15917	10727
Direct Labor Costs	346388			346388	215683
Overtime Premium	235311			235311	235311
Overhead	137438			137438	12490
Fort Worth Activity					
Total Inspection	719137			719137	463484
Division Costs	26814368	46478		26767890	19528920
Accelerated Amortization	41093	85		41008	41008
G. O. Overhead	324967	2058		322909	322909
Total Project Costs	27180428	48621		27131807	19892837
TOTAL HOURS	228577	1063		227514	119594

Cost Accounting Department
Works Accounting Section
AF Plant 19, Ext. 564
Report No. 4-16
9 March 1956

Distribution:
- Acker, D. B.
- Blakely, J. S.
- Burrows, D. C.
- Higgins, A. P.
- Hills, P. N.
- Jodka, J. J.
- Johnson, E. E.
- McManus, R. H.
- Moseley, M. F.
- Osborn, P. G.
- Pederson, R. C.
- Wood, B. J.

ENT OF ACCUMULATED COSTS

ANES - CONTRACT AF 33(600) - 31174

29 February 1956

	562 F-102A Costs	MG-3 Program Costs
	10727	5190
	215683	130705
	235311	
	12490	124948
	463484	255653
	19528920	7238970
	41008	
	322909	
	19892837	7238970
	119594	107920
S.		
C.		
P.		
E.		
H.		
F.		
.		
C.		

CONTROL SHEET
AF 33(600) 31174
DECEMBER 1956

OVERHEAD .205 For DEC
.158 For 6 mths Per.

	F102A		TF102A		TOTAL	
	Hrs	amt	Hrs	amt	Hrs	amt
① ENGR						
TAB	4153687	278645083	341646	22917975	4495333	301563058
㊲ SF&TOOLS	8907.8	5790992	7327	476318	96405	6267310
㊷ MTU.	57092	3266291	~~4339~~	~~248239~~	57092	3266291
㊸ MTU.		<674516>		~~<19964>~~		<674516>
From 37-4 to 42-1		34082		<34082>		-0-
	4298557	287061932	348973	23360211	4648830	310422143
③ EXP FAC						
TAB	172384	9823032	1418.0	807952	186564	10630984
④ WIND TUNNEL TAB	425	13821	35	1136	460	14957
⑤ TOOL ENG						
TAB	2442142	109149661	205473	9274897	2647615	118424558
㉚ SPARES	17209	762440	1415	62711	18624	825151
㉟ SPEC TOOLS	1891	79264	155	6519	2046	85783
	2461242	109991365	2070.43	9344127	2668285	119335492
⑥ TOOL MFG.						
TAB.	5137541	326210949	917132	52058924	6054673	378269873
㉛ SPARES	665	30987	55	2549	720	33536
㉜ SPEC TOOLS	15	95448		7855	15	103353
FROM END OF TAB.	40	967			40	967
From 6-4 to 6-1		49		<49>		
	5138261	326338450	917187	52069279	6055448	378407729
⑦ PLANT ENG.						
TAB.	594116	87638641	48985	3422874	643101	91061515
㊿		10540215		866944		11407159
	594116	98178856	48985	4289818	643101	102468674

CONTROL SHEET
3117V
DECEMBER, 1956

	F102A Hrs	F102A Amt	TF102A Hrs	TF102A Amt	TOTAL Hrs	TOTAL Amt
⑨ MFG.						
TAB	378199 2	62292037 29	19440 1	11196769 28	3801432 3	73488806 57
㊴ SPARES	34711 3	1604471 93	2854 9	154848 66	37566 2	1759320 59
⑬ PROD. COSTS		928585 63		76377 18		1004962 81
⑫ EXCESS		150065 55		12343 05		162408 60
㉓ CANCELLATION		821550 85		67573 44		889124 29
㉔ STOP ORDER			2 0	140 93	2 0	140 93
⑮ SURP & OBSEL		648386 62		53330 50		701717 12
㉒ SPEC TOOLS	222 5	565608 50	17 1	46109 85	239 6	611718 35
⑥ M.T.M.	1490 6	53939 92	3	1766 51	1490 9	55706 43
② REWORK		71838 88		5908 82		77747 70
③ TERMINATION			13 8	4134 11	13 8	4134 11
FROM 14-1&4		11629 74		8352 63		19982 37
FROM 15-1&4		<23941 08>		<17194 80>		<41135 88>
㊳ SPARES		1882 19		154 81		2037 00
FROM 12-1&12-4 9-4 TO 9-1 9-1 to 9-4	40 0	45443 37 191 45 <21934 77>	<40 0>	<191 45> 21934 77		45443 37 -0-
	3818456 6	67149756 07	22288 2	11632358 29	3840744 8	78782114 36
⑩ SHIPPING						
TAB	9911 9	51048 55	815 4	4198 84	10727 3	55247 39
㉘ SPARES	7984 0	37663 75	656 6	3097 89	8640 6	40761 64
㉞ SPEC TOOLS	298 1	26608 26	24 5	2188 56	322 6	28796 82
FROM 344&341						
	18194 0	115320 56	1496 6	9485 29	19690 5	124805 85
① PROD FLITE						
TAB	1544 0	44622 60	51 2	784 90	1595 2	45407 50
⑭ INSPECTION						
TAB	443716 7	2095707 94	18092 9	87177 28	461809.6	2182885 22
⑰ SPARES	3686 7	16668 31	303 2	1371 00	3989 9	18039 31
③ SPEC TOOLS	9 2	41 90	8	3 46	10 0	45 36
㊶ MTU	85 8	392 71	~~6 5~~	~~29 84~~	85 8	392 71
TO 40-1		<41989 67>		<3453 70>		<45443 37>
	447498 4	2070831 19	18396 9	85098 04	465895 3	2155919 23

58.2
41.8

CONTROLL SHEET
31174
DECEMBER, 1956

	F102A Hrs	F102A Amt	TF102A Hrs	TF102A Amt	TOTAL Hrs	TOTAL Amt
⑭ FT WORTH						
TAB			80	2002791	80	2002791
To PALMDALE			<80>	<4554>	<80>	<4554>
To 9-189-4				<1998237>		<1998237>
			-0-	-0-	-0-	-0-
⑮ POMONA						
TAB						<4113588>
To 9-189-4						4113588
						-0-
⑯ SER. PUB.						
TAB	796697 ✓	46957879	65528	3862336	862225	50820215
19· EDWARDS						
TAB·	45643 ✓	2866201	3753	235747	49396	3101948
⑳ HOLOMAN						
TAB	25729 ✓	1593446	2116	131063	27845	1724509
㉑ PALMDALE						
TAB	1793379	110926399	102422	6318840	1895801	117245239
FROM 14-4			80	4554	80	4554
	1793379	110926399	102502	6323394	1895881	117249793
TAB TOTAL.	✓18184663	7931803423	2132630	1273197715	60317293	9205001138

STATEMENT OF ACCUMULATED COSTS

63 TF-102A AIRPLANES - CONTRACT AF 33(600)-31174

31 December 1956

Page 1 of 5

	Total TF-102A Costs	Spares	Spec. Tools & Gr. Hndlg Equipment	Mobile Training Units	Actual TF-102A Proj. Costs
ENGINEERING					
DESIGN AND LIAISON					
Direct Labor Hours	34 897 3		732 7		34 164 6
Direct Labor Costs	105 477 18 ✓		2 312 85		103 164 33
Overtime Premium	6 618 14 ✓		129 59		6 488 55
Overhead	89 493 41 ✓		1 879 06		87 614 35
Subcontract Costs	14 407 59				14 407 59
Material & Other Costs	13 253 84		7 81		13 246 03
Travel & Per Diem	4 351 95		93 05		4 258 90
Fort Worth Activity					
Pomona Activity					
Total	233 602 11		4 422 36		229 179 75
SERVICE PUBLICATIONS					
Direct Labor Hours	6 552 8				6 552 8
Direct Labor Costs	16 103 27 ✓				16 103 27
Overtime Premium	1 194 96 ✓				1 194 96
Overhead	16 239 99 ✓				16 239 99
Subcontract Costs					
Material & Other Costs	5 085 14				5 085 14
Total	38 623 36				38 623 36
EXPERIMENTAL FACTORY					
Direct Labor Hours	1 418 0				1 418 0
Direct Labor Costs	3 309 84 ✓				3 309 84
Overtime Premium	216 89 ✓				216 89
Overhead	3 272 65 ✓				3 272 65
Subcontract Costs	402 83 ✓				402 83
Material & Other Costs	1 280 14				1 280 14
Fort Worth Activity					
Total	8 482 35				8 482 35
WIND TUNNEL					
Occupancy Hours					
Direct Labor Hours	3 5				3 5
Direct Labor Costs	10 69 ✓				10 69
Overtime Premium	67 ✓				67
Overhead					
Subcontract Costs					
Material & Other Costs					
	11 36				11 36

COST

STATEMENT OF ACCUMULATED COSTS

63 TF-102A AIRPLANES - CONTRACT AF 33(600)-31174

31 December 1956

	Total TF-102A Costs	Spares	Spec. Tools & Gr. Hndlg. Equipment	Mobile Training Unit	Actual TF-102A Proj. Costs
EDWARDS					
Direct Labor Hours	375.3				375.3
Direct Labor Costs	1018.02				1018.02
Overtime Premium	6.89				6.89
Overhead	1217.67				1217.67
Other Costs	106.73				106.73
Travel & Per Diem	8.16				8.16
Total	2357.47				2357.47
HOLLOMAN					
Direct Labor Hours	211.6				211.6
Direct Labor Costs	561.65				561.65
Overtime Premium					
Overhead	748.98				748.98
Other Costs					
Travel & Per Diem					
Total	1310.63				1310.63
FIELD SERVICE					
Direct Labor Hours					
Direct Labor Costs					
Overtime Premium					
Overhead					
Other Costs					
Travel & Per Diem					
Total					
TOTAL ENGINEERING	284387.28		4422.36		279964.92

COST 3 ACCTG

STATEMENT OF ACCUMULATED CO

63 TF-102A AIRPLANES - CONTRACT AF 33(600)-31174

31 December 1956

	Total TF-102A Costs	Spares	Special Tools & Gr. Hndlg. Equipment	Mobile Training Units	Actual TF-102A Proj. Costs
TOOLING					
TOOL ENGINEERING					
Direct Labor Hours	20 704 3	141 5	15 5		20 547 3
Direct Labor Costs	55 096 53 ✓	382 30	37 23		54 677 00
Overtime Premium	2 705 14 ✓	1 05	44		2 703 65
Overhead	35 639 60 ✓	243 76	27 52		35 368 32
Subcontract Costs					
Fort Worth Activity					
Pomona Activity					
Total	93 441 27	627 11	65 19		92 748 97
TOOL MANUFACTURING					
Direct Labor Hours	91 718 7	5 5			91 713 2
Direct Labor Costs	204 191 50 ✓	12 51			204 178 99
Overtime Premium	8 777 73 ✓				8 777 73
Overhead	215 398 08 ✓	12 63			215 385 45
✓ Raw Mat'l & Pur. Parts	26 384 62				26 384 62
✓ Subcontract Costs	10 230 23 ✓				10 230 23
✓ Other Costs	55 710 63	78 41			55 632 22
Fort Worth Activity					
Pomona Activity					
Total	520 692 79	103 55			520 589 24
PLANT ENGINEERING					
Direct Labor Hours	4 898 5				4 898 5
Direct Labor Costs	11 479 34 ✓				11 479 34
Overtime Premium	402 81 ✓				402 81
Overhead	11 339 48 ✓				11 339 48
Material & Other Costs	11 007 11				11 007 11
Sound Suppression Equip.					
MG-3 Test Equipment	8 266 61				8 266 61
Total	42 495 35				42 495 35
TOTAL TOOLING	656 629 41	730 66	65 19		655 833 56

STATEMENT OF ACCUMULATED CO

63 TF-102A AIRPLANES - CONTRACT AF 33(600)-31174

31 December 1956

	Total TF-102A Costs	Spares	Spec. Tools & GR. Hndlg. Equipment	Mobile Training Units	Actual TF-102A Proj. Costs
MANUFACTURING					
Direct Labor Hours	22,288.2	2,854.9	17.1		19,416.2
Direct Labor Costs	46,490.87	5,831.17	39.63		40,620.17
Overtime Premium	1,754.18	248.03	3.09		1,503.06
Overhead	51,867.63	6,582.75	39.31		45,245.57
Raw Mat'l & Pur. Parts	1,214,975.41	96,912.76	13,604.51		1,104,458.14
Subcontract Costs	1,520,997.94	16,223.96	32,575.51		1,472,198.47
Excess Usage	12,343.05				12,343.05
Surplus & Obsolete	53,330.50				53,330.50
Rework	5,908.82				5,908.82
Program Costs	76,377.18				76,377.18
Cancellation Costs	67,573.44				67,573.44
Stop Order Costs	140.93				140.93
Termination Costs	4,134.11				4,134.11
Other Costs	133,211.53	71.76	2.71		133,137.06
Travel & Per Diem	2,317.28				2,317.28
Pomona Activity	70,621.20	3,145.55			67,475.65
Fort Worth Activity	8,370,314.22	25,832.68			8,344,481.54
Total Manufacturing	11,632,358.29	154,848.66	46,264.66		11,431,244.97
SHIPPING					
Direct Labor Hours	1,496.5	656.7	24.5		815.3
Direct Labor Costs	2,844.51	1,247.69	42.43		1,554.39
Overtime Premium	149.48	87.24	1.57		60.67
Overhead	3,454.27	1,515.91	56.77		1,881.59
Material & Other Costs	3,037.03	247.44	2,087.79		701.80
Total Shipping	9,485.29	3,098.28	2,188.56		4,198.45
PRODUCTION FLIGHT					
Direct Labor Hours	51.2				51.2
Direct Labor Costs	230.65				230.65
Overtime Premium	1.47				1.47
Overhead	456.69				456.69
Other Costs	68.24				68.24
Travel & Per Diem	27.85				27.85
Total Production Flight	784.90				784.90

STATEMENT OF ACCUMULATED COSTS

63 TF-102A AIRPLANES - CONTRACT AF 33(600)-31174

31 December 1956

	Total TF-102A Costs	Spares	Spec. Tools & Gr. Hndlg. Equipment	Mobile Training Units	Actual TF-102A Proj. Costs
PALMDALE					
Direct Labor Hours	10 250 2				10 250 2
Direct Labor Costs	24 664 94				24 664 94
Overtime Premium	2 504 77				2 504 77
Overhead	35 978 97				35 978 97
Other Costs	7 46				7 46
Travel & Per Diem	77 80				77 80
Total Palmdale	63 233 94				63 233 94
INSPECTION					
Direct Labor Hours	18 396 9	303 2	8		18 092 7
Direct Labor Costs	40 382 83	661 46	1 70		39 719 67
Overtime Premium	2 166 62	9 64			2 156 98
Overhead	42 548 59	699 90	1 76		41 846 93
Pomona Activity					
Fort Worth Activity					
Total Inspection	85 098 04	1 371 00	3 46		83 723 58
Division Costs	12 731 977 15	160 048 60	52 944 23		12 518 984 32
Accelerated Amortization					
G. O. Overhead	33 436 32	554 89	124 08		32 757 35
Total Project Costs	12 765 413 47	160 603 49	53 068 31		12 551 741 67
Total Hours	213 263 0	3 961 8	790 6		208 510 6

Note: Accelerated Amortization is now included in the overhead rate and hereafter will not be segregated on the Statement of Accumulated Cost.

Distribution

Blakely, J. S.
Herbig, J. R.
Hills, P. N.
Jodka, J. J.
Johnson, R. E.
Mc Manus, R. H.
Moseley, M. F.
Mrvichin, M. M.
Osborn, P. G.
Polsley, C.
Thetford, J. W.

Cost Accounting Department
Works Accounting Section
Plant II, Ext. 564
S.D.R. 10-6-16
4 February 1957

STATEMENT OF ACCUMULATED COSTS

562 F-102A AIRPLANES - CONTRACT AF 33(600)-31174

31 December 1956

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	Total F-102A Costs	Spares	Spec. Tools & Gr. Hndlg. Equipment	Mobile Training Units	Actual F-102A Proj. Costs
ENGINEERING					
DESIGN AND LIAISON					
Direct Labor Hours	429,985.7		8,907.8	5,709.2	415,368.7
Direct Labor Costs	1,299,294.18 ✓		28,119.29	16,913.71	1,254,261.18
Overtime Premium	81,569.70 ✓		1,575.48	1,107.17	78,887.05
Overhead	1,102,259.32 ✓		22,845.33	14,208.07	1,065,205.92
Subcontract Costs	175,166.06 ✓				175,166.06
Material & Other Costs	159,311.97		94.99	4,484.46	154,732.52
Travel & Per Diem	53,018.09		1,131.19		51,886.90
Fort Worth Activity					
Pomona Activity					
Total	2,870,619.32		53,766.28	36,713.41	2,780,139.63
SERVICE PUBLICATIONS					
Direct Labor Hours	79,669.7				79,669.7
Direct Labor Costs	195,781.77				195,781.77
Overtime Premium	14,528.26 ✓				14,528.26
Overhead	197,444.12				197,444.12
Subcontract Costs					
Material & Other Costs	61,824.64				61,824.64
Total	469,578.79				469,578.79
EXPERIMENTAL FACTORY					
Direct Labor Hours	17,238.4				17,238.4
Direct Labor Costs	40,240.83 ✓				40,240.83
Overtime Premium	2,637.11 ✓				2,637.11
Overhead	39,788.52 ✓				39,788.52
Subcontract Costs	4,897.62 ✓				4,897.62
Material & Other Costs	15,563.86				15,563.86
Fort Worth Activity					
Total	103,127.94				103,127.94
WIND TUNNEL					
Occupancy Hours					
Direct Labor Hours	42.5				42.5
Direct Labor Costs	130.09 ✓				130.09
Overtime Premium	8.12 ✓				8.12
Overhead					
Subcontract Costs					
Material & Other Costs					
Total	138.21				138.21 R

STATEMENT OF ACCUMULATED COSTS

562 F-102A AIRPLANES - CONTRACT AF 33(600)-31174

31 December 1956

	Total F-102A Costs	Spares	Spec. Tools & Gr. Hndlg. Equipment	Mobile Training Units	Actual F-102A Proj. Costs
EDWARDS					
Direct Labor Hours	4 564 3				4 564 3
Direct Labor Costs	12 377 05				12 377 05
Overtime Premium	83 81				83 81
Overhead	14 804 33				14 804 33
Other Costs	1 297 61				1 297 61
Travel & Per Diem	99 21				99 21
Total	28 662 01				28 662 01
HOLLOMAN					
Direct Labor Hours	2 572 9				2 572 9
Direct Labor Costs	6 828 44				6 828 44
Overtime Premium					
Overhead	9 106 02				9 106 02
Other Costs					
Travel & Per Diem					
Total	15 934 46				15 934 46
FIELD SERVICE					
Direct Labor Hours					
Direct Labor Costs					
Overtime Premium					
Overhead					
Other Costs					
Travel & Per Diem					
Total					
TOTAL ENGINEERING	3 488 060 73		53 766 28	36 713 41	3 397 581 04

COST 3

STATEMENT OF ACCUMULATED COSTS
562 F-102A AIRPLANES - CONTRACT AF 33(600)-31174

31 December 1956

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	Total F-102A Costs	Spares	Spec. Tools & Gr. Hndlg. Equipment	Mobile Training Units	Actual F-102A Proj. Costs
TOOLING					
TOOL ENGINEERING					
Direct Labor Hours	246,124.2	1,720.9	189.1		244,214.2
Direct Labor Costs	640,390.97	4,648.01	452.65		635,290.31
Overtime Premium	35,852.72	12.75	5.37		35,834.60
Overhead	423,669.96	2,963.64	334.62		420,371.70
Subcontract Costs					
Fort Worth Activity					
Pomona Activity					
Total	1,099,913.65	7,624.40	792.64		1,091,496.61
TOOL MANUFACTURING					
Direct Labor Hours	513,826.1	66.5		1.5	513,758.1
Direct Labor Costs	1,179,325.15	152.10		3.04	1,179,170.01
Overtime Premium	84,595.21				84,595.21
Overhead	1,182,270.84	153.56		3.46	1,182,113.82
Raw Mat'l & Pur. Parts	118,263.18				118,263.18
Subcontract Costs	233,688.03				233,688.03
Other Costs	465,242.09	953.18			464,288.91
Fort Worth Activity					
Pomona Activity					
Total	3,263,384.50	1,258.84		6.50	3,262,119.16
PLANT ENGINEERING					
Direct Labor Hours	59,411.6				59,411.6
Direct Labor Costs	139,170.37				139,170.37
Overtime Premium	4,897.07				4,897.07
Overhead	137,536.99				137,536.99
Material & Other Costs	132,225.58				132,225.58
Sound Suppression Equip.	462,556.40				462,556.40
MG-3 Test Equipment	100,504.53				100,504.53
Total	976,890.94				976,890.94
TOTAL TOOLING	5,340,189.09	8,883.24	792.64	6.50	5,330,506.71

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STATEMENT OF ACCUMULATED COSTS

562 F-102A AIRPLANES - CONTRACT AF 33(600) - 31174

31 December 1956

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	Total F-102A Costs	Spares	Spec. Tools & Gr. Hndlg. Equipment	Mobile Training Units	Actual F-102A Costs
MANUFACTURING					
Direct Labor Hours	3,818,456.6	34,711.3	208.0	1,501.4	3,782,035.9
Direct Labor Costs	7,520,006.03	70,895.11	480.72	3,120.06	7,445,510.14
Overtime Premium	498,738.23	3,015.49	37.54	79.70	495,605.50
Overhead	8,819,116.18	80,032.16	477.94	3,465.40	8,735,140.68
Raw Mat'l & Pur. Parts	14,793,083.91	1,178,255.28	165,402.18	35,962.41	13,413,464.04
Subcontract Costs	18,543,234.22	197,249.10	396,049.77	50,386.22	17,899,549.13
Excess Usage	150,065.55				150,065.55
Surplus & Obsolete	648,386.62				648,386.62
Freight					
Rework	71,838.88				71,838.88
Program Costs	928,585.63				928,585.63
Cancellation Costs	821,550.85				821,550.85
Other Costs	1,626,517.97	872.51	33.02	4,560.32	1,621,052.12
Travel & Per Diem	28,425.19				28,425.19
Pomona Activity	1,043,655.71	38,243.37			1,005,412.34
Fort Worth Activity	11,656,551.10	35,908.91			11,620,642.19
Total Manufacturing	67,149,756.07	1,604,471.93	562,481.17	97,574.11	64,885,228.86
SHIPPING					
Direct Labor Hours	18,194.0	7,984.9	298.1		9,911.0
Direct Labor Costs	34,583.17	15,169.31	515.85		18,898.01
Overtime Premium	1,817.18	1,060.53	19.15		737.50
Overhead	41,996.30	18,430.18	690.14		22,875.98
Material & Other Costs	36,923.91	3,008.42	25,383.12		8,532.37
Total Shipping	115,320.56	37,668.44	26,608.26		51,043.86
PRODUCTION FLIGHT					
Direct Labor Hours	1,544.0				1,544.0
Direct Labor Costs	6,478.07				6,478.07
Overtime Premium	265.81				265.81
Overhead	12,536.13				12,536.13
Other Costs	25,003.99				25,003.99
Travel & Per Diem	338.60				338.60
Total Production Flight	44,622.60				44,622.60

STATEMENT OF ACCUMULATED CO

562 F-102A AIRPLANES - CONTRACT AF 33(600)-31174

31 December 1956

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	Total F-102A Costs	Spares	Spec. Tools & Gr. Hndlg. Equipment	Mobile Training Units	Actual F-102A Proj. Costs
PALMDALE					
Direct Labor Hours	179 337 9				179 337 9
Direct Labor Costs	428 287 56				428 287 56
Overtime Premium	53 903 86				53 903 86
Overhead	626 020 91				626 020 91
Other Costs	90 75				90 75
Travel & Per Diem	960 91				960 91
Total Palmdale	1 109 263 99				1 109 263 99
INSPECTION					
Direct Labor Hours	447 498 4	3 686 7	9 2	85 8	443 716 7
Direct Labor Costs	989 433 22	8 041 91	20 58	194 79	981 175 94
Overtime Premium	47 432 86	117 14			47 315 72
Overhead	1 033 955 11	8 509 26	21 32	197 92	1 025 226 61
Fort Worth Activity					
Pomona Activity					
Total Inspection	2 070 821 19	16 668 31	41 90	392 71	2 053 718 27
Division Costs	79 318 034 23	1 667 691 92	643 690 25	134 686 73	76 871 965 33
Accelerated Amortization					
G. O. Overhead	917 312 00	7 608 15	1 513 86	1 083 55	907 106 44
Total Project Costs	80 235 346 23	1 675 300 07	645 204 11	135 770 28	77 779 071 77
TOTAL HOURS	5 818 466 3	48 170 3	9 612 2	7 297 9	5 753 385 9

Note: Accelerated Amortization is now included in the overhead rate and hereafter will not be segregated on the Statement of Accumulated Cost.

Distribution

Blakely, J. S.
Herbig, J. R.
Hills, P. N.
Jodka, J. J.
Johnson, E. E.
Mc Manus, R. H.
Moseley, M. F.
Mrvichin, M. M.
Osborn, H. G.
Polsley, C.
Thetford, J. W.

Cost Accounting Department
Works Accounting Section
Plant II, Ext. 564
S. D. R. 10-6-16
4 February 1957

COST 3 ACCTG

Redistribution of Ft Worth Costs
Contract 31174
~~November~~ December, 1956

W. ORK ORDER	SUB ACCT	AMT	GROUP CODE	DISTRIBUTION CODE
18999	909	1158769735 ~~1161239624~~	9	1
18999	909	833612891 ~~834413068~~	9	4
18999	909	3590891 ~~1690217~~	26	1
18999	909	3583368 7213936	26	4
18999	909	(900000000)	14	4
18999	909	(900000000)	14	4
18999	909	(1985569885)	14	4

CHANGES TO MASTER DECK
CONTRACT AF 33(600) 3[illegible]4
JANUARY, 1957

WORK ORDER	SUB-ACCOUNT	PERCENTAGE		GROUP CODE		DISTRIBUTION CODE	
		EF	ETF				
18202	121, 141		100%		9		4
18203	121, 141,		100%		9		4
18212	121, 141,		100%		9		4
18213	121, 141,		100%		9		4
18215	121,		100%		9		4
18201	141,						
18204	141,						
18108	111, 121, 141	100%		9		1	
18737	115, 125, 145,	92.4%	7.6%	28	28	1	4
18895	177	92.4%	7.6%	40	40	1	4
18221	715, 745		100%		21		4
18881	113, 143	92.4%	7.6%	40	40	1	4
18895	113, 143, 161, ~~[illegible]~~, ~~[illegible]~~ 181	92.4%	7.6%	40	40	1	4
18895	413, 443	92.4%	7.6%	45	45	1	4
18895	271	92.4%	7.6%	42	42	1	4
18767	161	92.4%	7.6%	32	32	1	4
18902	112, 141, 142,	92.4%	7.6%	9	9	1	4
18911	151	100%		9		1	
18913	151	79.4%	20.6%	9	9	1	4
18902	241	92.4%	7.6%	1	1	1	4
18911	241	100.0%		1		1	
18907	251	92.4%	7.6%	1	1	1	4

Redistribution of Pomona Costs
Contract 31174 December 1956

WORK ORDER	SUB ACCT	AMOUNT	GROUP CODE	DISTR. CODE
18888	808	99702325 ~~100228807~~	9	1
18888	808	8200624 ~~8243928~~	9	4
18888	808	104	9	1
18888	808	02	9	4
18888	808	236	9	1
18888	808	35	9	4
18888	808	354395	9	1
18888	808	29149	9	4
18888	808	<19684>	9	1
18888	808	2884279 ~~2535662~~	9	1
18888	808	257221 ~~208561~~	9	4
18888	808	3359682 ~~3303614~~	26	1
18888	808	283822 ~~271726~~	26	4
18888	808	373655 ~~342855~~	26	1
18888	808	30733 ~~28200~~	26	4
18888	808	12649	9	1
18888	808	1040	9	4
18888	808	115541279	15	1

92.4
7.6

Burma Costs for Contract 31174
December 1956

W.O.	Mfg	Spares	MTU	Percentage		F	TF
				F	TF		
18000	107902947			92.4	7.6	99702323	8200624
18015	106			97.8	2.2	104	02
18017	271			87.0	13.0	236	35
18049	383544			92.4	7.6	354395	29149
18440	<19684>			100.0		<19684>	
18446	3121514			92.4	7.6	2884279	237235
18701		3734504		92.4	7.6	3450682	283822
18711		404388		92.4	7.6	373655	30733
18895			13689	92.4	7.6	12649	1040
	111388698	4138892	13689			106758639	8782640

Fort Worth
Contract 31174
November charges   Spares

F.W. W.O.	NOVEMBER CURRENT MONTH	CUMMULATIVE
37-52-001	172890	368415
37-52-002	5929	6451
37-52-003	1241	2051
37-61-101	89053	545050
37-61-109	372252	600677
37-61-201	18710	50531
37-61-501	12	5872
37-62-101	525132	1368496
37-62-109	1894303	2598215
37-62-201	184258	615418
37-62-202	<1918>	-0-
37-62-209	8079	12015
37-62-501	-0-	20
37-62-601	65	948
	3270006	6174159

STATEMENT SHOWS

INCREASE COST LEDGER - W.O. 18767 S/A 681

Pomona Costs for contract 31174
NOVEMBER 1956

W.O.	Mfg	Spares	M.T.U.	PERCENTAGE F	TF	[redacted] F	[redacted] TF
18000	33128 07			100 %		33128 07	
18001	38917 80			100 %		38917 80	
18002	192006 67			100 %		192006 67	
18003	271854 28			100 %		271854 28	
18004	181802 40			100 %		181802 40	
18011	10618 79			100 %		10618 79	
18012	48771 45			100 %		48771 45	
18013	56838 44			100 %		56838 44	
18014	36105 99			100 %		36105 99	
18015	1 06			97.8 %	2.2 %	1 04	02
18017	2 71			87.0 %	13.0 %	2 36	35
18049	3835 44			92.4 %	7.6 %	3543 95	291 49
18440	‹96 84›			100 %		‹96 84›	
18446	27442 23			100 %		27442 23	
18701		31999 59		92.4 %	7.6 %	29567 62	2431 97
18711		3710 55		92.4 %	7.6 %	3428 55	282 00
18895			63 76	92.4 %	7.6 %	58 91	4 85
TOTAL	901128 49	35710 14	63 76			933891 71	3010 68

Contract 31174
January 1963

	A			B					
	Total Contract	Total MTU Spares, GSE	Total Airplanes	Total MTU Spares, GSE	Spares F106 "A"	Spares TF 102	GSE F102	GSE TF 102	MTU
Contract Total	436 168 356.13	102 952 314.23	333 216 041.90	102 952 314.23	65 048 348.15	7 721 950.96	27 491 441.90	2 261 148.41	429 424.81
G.O. Authd									
San Diego	4 568 867.80	281 882.55	4 286 985.25	281 882.55	195 885.55	15 983.96	62 355.36	5 128.51	2 529.17
Fort Worth	1 238 748.63	58 067.58	1 180 686.05	58 067.58	24 235.04	33 759.13	17.34		51.07
Pomona	46 534.97	6 529.39	40 005.58	6 529.39	6 023.73	495.46			10.20
Total Incl G.O.	442 022 507.53	103 298 788.75	338 723 718.78	103 298 788.75	65 274 492.47	7 772 189.51	27 553 814.60	2 266 276.92	432 015.25

	C		
	Total Airplanes	F102 A	TF102
Contract Total	333 216 041.90	292 072 896.19	41 143 145.71
G.O. Authd.			
San Diego	4 286 985.25	3 903 433.28	383 551.97
Fort Worth	1 180 686.05	775 366.37	405 319.68
Pomona	40 005.58	36 965.19	3 040.39
Total Incl G.O.	338 723 718.78	296 788 661.03	41 935 057.75

STATEMENT OF ACCUMULATE

DESCRIPTION	TOTAL CONTRACT	TOTAL MTU SPARES, GSE	TOTAL AIRPLANES
ENGINEERING			
DESIGN AND LIAISON			
DIR LABOR HRS	12577092	1177539	11399553
DIR LABOR AMT	384046310	32602301	351444009
OVERTIME	16179635	1251227	14928408
OVERHEAD	342045401	32790614	309254787
MATERIAL	173897857	26632242	147265615
SUBCONTRACT	151736681	96230701	55505980
TRAV PER DIEM	21194987	1372264	19822723
GROUP TOTALS HRS	12577092	1177539	11399553
GROUP TOTALS AMT	1089100871	190879349	898221522
EXPERIMENTAL FACTORY			
DIR LABOR HRS	629434		629434
DIR LABOR AMT	15259451		15259451
OVERTIME	573975		573975
OVERHEAD	16199840		16199840
MATERIAL	7850472		7850472
SUBCONTRACT	1187679		1187679
TRAV PER DIEM	97995		97995
GROUP TOTALS HRS	629434		629434
GROUP TOTALS AMT	41169412		41169412
WIND TUNNEL			
DIR LABOR HRS	13744		13744
DIR LABOR AMT	412040		412040
OVERTIME	12625		12625
OCCUPANCY HRS	185		185
OCCUPANCY HRS	176545		176545
MATERIAL	7781		7781
TRAV PER DIEM	2478		2478
GROUP TOTALS HRS	13929		13929
GROUP TOTALS AMT	611469		611469
EDWARDS			
DIR LABOR HRS	180839		180839
DIR LABOR AMT	506098		506098
OVERTIME	106094		106094
OVERHEAD	6218785		6218785
GROUP TOTALS HRS	180839		180839
GROUP TOTALS AMT	11390977		11390977
HOLLOMAN			
DIR LABOR HRS	148691		148691

DESCRIPTION	TOTAL CONTRACT	TOTAL MTU SPARES, GSE	TOTAL AIRPLANES
DIR LABOR AMT	4040850		4040850
OVERTIME	153721		153721
OVERHEAD	5538432		5538432
MATERIAL	264695		264695
TRAV PER DIEM	2162650		2162650
GROUP TOTALS HRS	148691		148691
GROUP TOTALS AMT	12160348		12160348
DEPARTMENT TOTALS HRS	13549985	1177539	12372446
DEPARTMENT TOTALS AMT	1154433077	190879349	963553728
CUSTOMER SERVICE			
SERVICE ENGINEERING			
DIR LABOR HRS	260584		260584
DIR LABOR AMT	8374044		8374044
OVERTIME	21130		21130
OVERHEAD	8707489		8707489
GROUP TOTALS HRS	260584		260584
GROUP TOTALS AMT	17102663		17102663
SERVICE PUBLICATION			
DIR LABOR HRS	2142635	342002	1800633
DIR LABOR AMT	52584062	7766510	44817552
OVERTIME	2889959	288885	2601074
OVERHEAD	50622227	2527967	48094260
MATERIAL	15895502	2343802	13551700
SUBCONTRACT	2724752	2724752	
TRAV PER DIEM	469878	82988	386890
GROUP TOTALS HRS	2142635	342002	1800633
GROUP TOTALS AMT	125186380	15734904	109451476
FIELD SERVICE			
DIR LABOR HRS	1089110		1089110
DIR LABOR AMT	36275429		36275429
OVERTIME	313590		313590
OVERHEAD	8904722		8904722
MATERIAL	1526435		1526435
TRAV PER DIEM	32728655		32728655
GROUP TOTALS HRS	1089110		1089110
GROUP TOTALS AMT	79748831		79748831
DEPARTMENT TOTALS HRS	3492329	342002	3150327
DEPARTMENT TOTALS AMT	222037874	15734904	206302970
TOOLING			
TOOL ENGINEERING			
DIR LABOR HRS	5925735	177327	5748408

DESCRIPTION	TOTAL CONTRACT	TOTAL MTU SPARES, GSE	TOTAL AIRPLANES
DIR LABOR AMT	154209786	5647297	148562489
OVERTIME	5188780	27599	5161181
OVERHEAD	112679545	4073121	108606424
GROUP TOTALS HRS	5925735	177327	5748408
GROUP TOTALS AMT	272078111	9748017	262330094
		TOOL MANUFACTURING	
DIR LABOR HRS	10682109	118352	10563757
DIR LABOR AMT	247444325	3159306	244285019
OVERTIME	12877782	13394	12864388
OVERHEAD	257139975	3525991	253613984
SUBCONTRACT	52899408	89154	52810254
TRAV PER DIEM	205392		205392
MAT N PURC PTS	30417846	1284797	29133049
OTHER COSTS	82473088	9456724	73016364
GROUP TOTALS HRS	10682109	118352	10563757
GROUP TOTALS AMT	683457816	17529366	665928450
		MANUFACTURING AIDS	
DIR LABOR HRS	2602565		2602565
DIR LABOR AMT	61797741		61797741
OVERTIME	1444979		1444979
OVERHEAD	65354165		65354165
MATERIAL	77206216		77206216
SUBCONTRACT	4782280		4782280
TRAV PER DIEM	63134		63134
PROD TEST EQUP	16893245		16893245
SOUND SUPRESS	73802139		73802139
GROUP TOTALS HRS	2602565		2602565
GROUP TOTALS AMT	301343899		301343899
DEPARTMENT TOTALS HRS	19210409	295679	18914730
DEPARTMENT TOTALS AMT	1256879826	27277383	1229602443
		MANUFACTURING	
		FACTORY	
DIR LABOR HRS	141997910	7098360	134899550
DIR LABOR AMT	2918760541	169548406	2749212135
OVERTIME	102412199	2092581	100319618
OVERHEAD	3532291156	209632966	3322658190
TRAV PER DIEM	3333		3333
SPARES OVHD	53008436	53008436	
ALLOCATED HRS	431745	11	431734
GROUP TOTALS HRS	142429655	7098371	135331284
GROUP TOTALS AMT	6606475665	434282389	6172193276

GENERAL DYNAMICS
CONVAIR

TF-72D-IV RPT D2639A04

STATEMENT OF ACCUMULAT

DESCRIPTION	TOTAL CONTRACT	TOTAL MFU SPARES, GSE	TOTAL AIRPLANES	
MATERIAL AND SUBCONTRACT				
SUBCONTRACT	9148529166	2435544011	6712985155	
MAT N PURC PTS	13145707132	6395716665	6749990467	
EXCESS USAGE	105723981		105723981	
SURPLUS N OBSO	1168288975		1168288975	
REWORK	160317505	11494703	148822802	
PROGRAM COSTS	392645747		392645747	
CANCELLATION	98362912	8193234	90169678	
GROUP TOTALS HRS				
GROUP TOTALS AMT	24219575418	8850948613	15368626805	
OTHER COSTS				
	5602899		5602899	
TRAV PER DIEM	33101374	365573	32735801	
OTHER COSTS	594399288	25415769	568983519	
GROUP TOTALS HRS				
GROUP TOTALS AMT	633103561	25781342	607322219	
FORT WORTH COSTS				
SUBCONTRACT	5862636934	422532325	5440104609	
GROUP TOTALS HRS				
GROUP TOTALS AMT	5862636934	422532325	5440104609	
POMONA COSTS				
SUBCONTRACT	188433422	21720300	166713122	
GROUP TOTALS HRS				
GROUP TOTALS AMT	188433422	21720300	166713122	
PALMDALE				
DIR LABOR HRS	30531130		30531130	
DIR LABOR AMT	739780626		739780626	
OVERTIME	44321945		44321945	
OVERHEAD	912918890		912918890	
MATERIAL	61172917		61172917	
TRAV PER DIEM	2072047		2072047	
GROUP TOTALS HRS	30531130		30531130	
GROUP TOTALS AMT	1760266425		1760266425	
PALMDALE INSPECTION				
DIR LABOR HRS	6638373		6638373	
DIR LABOR AMT	166633612		166633612	
OVERTIME	10083080		10083080	

GENERAL DYNAMICS
CONVAIR

TP-72D-IV RPT D2639A04

STATEMENT OF ACCUMULAT

▼ DESCRIPTION	TOTAL CONTRACT	TOTAL MFG SPARES, OED	TOTAL AIRPLANES
OVERHEAD	198777778		198777778
GROUP TOTALS HRS	6638373		6638373
GROUP TOTALS AMT	375494470		375494470
		INSPECTION	
DIR LABOR HRS	18174344	888229	17286115
DIR LABOR AMT	417382547	22149671	395232876
OVERTIME	11571854	214416	11357438
OVERHEAD	458509769	25901869	432607900
TRAV PER DIEM	149572	25253	124319
GROUP TOTALS HRS	18174344	888229	17286115
GROUP TOTALS AMT	887613742	48291209	839322533
		SHIPPING	
DIR LABOR HRS	3735319	3107857	627462
DIR LABOR AMT	78480463	65863488	12616975
OVERTIME	671134	546929	124205
OVERHEAD	108401340	91407232	16994108
MATERIAL	58829608	55730461	3099147
SUBCONTRACT	45357008	44235481	1121527
GROUP TOTALS HRS	3735319	3107857	627462
GROUP TOTALS AMT	291739553	257783591	33955962
		PRODUCTION FLIGHT	
DIR LABOR HRS	360542		360542
DIR LABOR AMT	16440926		16440926
OVERTIME	299947		299947
OVERHEAD	17656722		17656722
MATERIAL	259919		259919
TRAV PER DIEM	3631460		3631460
GAS N OIL	119855465		119855465
GROUP TOTALS HRS	360542		360542
GROUP TOTALS AMT	158144439		158144439
DEPARTMENT TOTALS HRS	201869363	11094457	190774906
DEPARTMENT TOTALS AMT	4098348362 9	1006133976 9	3092214386 0
	1207	18	1189
GROUP TOTALS HRS			
GROUP TOTALS AMT	1207	18	1189
DEPARTMENT TOTALS HRS			
DEPARTMENT TOTALS AMT	1207	18	1189
CONTRACT TOTALS HRS	238122086	12909677	225212409
CONTRACT TOTALS AMT	43616835613	10295231423	33321604190
G.O. OVERHEAD			
SAN DIEGO	4 568 867 80	281 882 55	4 286 985 25
FORT WORTH	1 238 748 63	58 062 58	1 180 686 05
POMONA	46 534 97	6 529 39	40 005 58
TOTAL INC'L. G.O.	442 022 507.53	103,298 788.75	338 723 718.78

DESCRIPTION	TOTAL MTU SPARES, GSE	SPARES F-106"A"	SPARES TF-102	GSE F-102
		ENGINEERING		
		DESIGN AND LIAISON		
DIR LABOR HRS	1277539	1120	92	975818
DIR LABOR AMT	32602301	29892	2459	26711094
OVERTIME	1251227			1018365
OVERHEAD	32790614	35587	2927	27177199
MATERIAL	26632242	5465868	438700	18183255
SUBCONTRACT	96230701			64876560
TRAV PER DIEM	1372264			1153073
GROUP TOTALS HRS	1277539	1120	92	975818
GROUP TOTALS AMT	190879349	5531347	444086	139118546
DEPARTMENT TOTALS HRS	1277539	1120	92	975818
DEPARTMENT TOTALS AMT	190879349	5531347	444086	139118546
		CUSTOMER SERVICE		
		SERVICE PUBLICATION		
DIR LABOR HRS	342002	275167	22633	40843
DIR LABOR AMT	7766510	6259600	514859	916656
OVERTIME	288885	223133	18353	43797
OVERHEAD	2527967	2032978	167213	302866
MATERIAL	2343802	2163746	177973	1923
SUBCONTRACT	2724752	2517671	207081	
TRAV PER DIEM	82988	82988		
GROUP TOTALS HRS	342002	275167	22633	40843
GROUP TOTALS AMT	15734904	13280116	1085479	1265242
DEPARTMENT TOTALS HRS	342002	275167	22633	40843
DEPARTMENT TOTALS AMT	15734904	13280116	1085479	1265242
		TOOLING		
		TOOL ENGINEERING		
DIR LABOR HRS	177327	156291	12854	7559
DIR LABOR AMT	5647297	4960409	408000	257699
OVERTIME	27599	25501	2098	
OVERHEAD	4073121	3546117	291672	217441
GROUP TOTALS HRS	177327	156291	12854	7559
GROUP TOTALS AMT	9748017	8532027	701770	475140
		TOOL MANUFACTURING		
DIR LABOR HRS	118352	102320	8419	6909

T OF ACCUMULATED COSTS

PAGE B- 1 DATE JAN 63 CONTRACT AF-31174

S 2	GSE F-102	GSE TF-102	MTU
ISON			
92	975818	80262	120247
2459	26711094	2197018	3661838
	1018365	83761	149101
2927	27177199	2235353	3339548
38700	18183255	1494623	1049796
	64875560	5336083	26019058
	1153073	94842	124349
92	975818	80262	120247
44086	139118546	11441680	34343690
92	975818	80262	120247
44086	139118546	11441680	34343690
CE			
ATION			
22633	40843	3359	
14859	916656	75395	
18353	43797	3602	
67213	302866	24910	
77973	1923	160	
07081			
22633	40843	3359	
085479	1265242	104067	
22633	40843	3359	
085479	1265242	104067	
ING			
12854	7559	623	
408000	257699	21189	
2098			
291672	217441	17891	
12854	7559	623	
701770	475140	39080	
URING			
8419	6909	569	135

GENERAL DYNAMICS
CONVAIR

TF-72D-IV RPT D2639A02

STATEMENT OF ACCUMULAT

DESCRIPTION	TOTAL MTU SPARES, GSE	SPARES F-106"A"	SPARES TF-102	GSE F-102	T
DIR LABOR AMT	3159306	2725476	224173	190919	
OVERTIME	13394	12376	1018		
OVERHEAD	3525991	3037895	249870	217243	
SUBCONTRACT	89154	80019	6301	2619	
MAT N PURC PTS	1284797	758739	54341	435814	
OTHER COSTS	9456724	747606	69558	7983003	
GROUP TOTALS HRS	118352	102320	8419	6909	
GROUP TOTALS AMT	17529366	7362111	605261	8829598	
DEPARTMENT TOTALS HRS	295679	258611	21273	14468	
DEPARTMENT TOTALS AMT	27277383	15894138	1307031	9304738	
		MANUFACTURING			
		FACTORY			
DIR LABOR HRS	7098360	4921307	404787	1617532	
DIR LABOR AMT	169548406	111730037	9189905	44512425	
OVERTIME	2092581	1611298	132533	309980	
OVERHEAD	209632966	141483354	11627884	51749483	
SPARES OVHD	53008436	43092485	3543800	5887869	
ALLOCATED HRS	11	10	1		
GROUP TOTALS HRS	7098371	4921317	404788	1617532	
GROUP TOTALS AMT	434282389	297917174	24494122	102459757	
		MATERIAL AND SUBCONTRACT			
SUBCONTRACT	2435544011	503861019	41443116	1744784759	1
MAT N PURC PTS	6395716665	5204978675	428120375	700530337	
REWORK	11494703	10621109	873594		
CANCELLATION	8193234	254186	7897581	38315	
GROUP TOTALS AMT	8850948613	5719714989	478334666	2445353411	2
		OTHER COSTS			
TRAV PER DIEM	365573	100788	8289	237003	
OTHER COSTS	25415769	19504773	1603432	3382301	
GROUP TOTALS AMT	25781342	19605561	1611721	3619304	
		FORT WORTH COSTS			
SUBCONTRACT	422532325	178112615	243955197	48222	
GROUP TOTALS AMT	422532325	178112615	243955197	48222	
		POMONA COSTS			
SUBCONTRACT	21720300	20014025	1643894		
GROUP TOTALS AMT	21720300	20014025	1643894		
		INSPECTION			
DIR LABOR HRS	888229	612414	50371	206921	

OF ACCUMULATED COSTS

PAGE B- 2 DATE JAN 63 CONTRACT AF-31174

	GSE F-102	GSE TF-102	MTU
4173	1909 19	157 04	30 34
1018			
9870	2172 43	178 68	31 15
6301	26 19	2 15	
4341	4358 14	359 03	
9558	79830 03	6565 57	
419	6909	569	135
5261	88295 98	7262 47	61 49
273	14468	1192	135
7031	93047 38	7653 27	61 49
787	1617532	133047	21687
9905	445124 25	36611 96	4548 43
2533	3099 80	254 97	132 73
7884	517494 83	42565 14	5157 31
3800	58878 69	4842 62	
1			
788	1617532	133047	21687
4122	1024597 57	84274 89	9838 47
BCONTRACT			
3116	174478 47 59	1435104 39	19446 78
0375	7005303 37	576193 85	44678 93
3594			
7581	383 15	31 52	
4666	24453534 11	2011329 76	64125 71
8289	2370 03	194 93	
03432	33823 01	2778 77	6473 86
11721	36193 04	2973 70	6473 86
TS			
55197	482 22		4162 91
55197	482 22		4162 91
43894			623 81
43894			623 81
0371	206921	17020	1503

ANOTHER UARCO BUSINESS FORM - OAKLAND 266985

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GENERAL DYNAMICS
CONVAIR

TF-72D-IV RPT D2639A02

STATEMENT OF ACCUMULA

DESCRIPTION	TOTAL MTU SPARES, GSE	SPARES F-106"A"	SPARES TF-102	GSE F-102	G TF
DIR LABOR AMT	22149671	15060748	1238762	5374068	
OVERTIME	214416	174221	14330	23788	
OVERHEAD	25901869	17935895	1475243	5964193	
TRAV PER DIEM	25253	14958	10295		
GROUP TOTALS HRS	888229	612414	50371	206921	
GROUP TOTALS AMT	48291209	33185822	2738630	11362049	
		SHIPPING			
DIR LABOR HRS	3107857	2799656	230272	72006	
DIR LABOR AMT	65863488	59184143	4867959	1673720	
OVERTIME	546929	503064	41378	2298	
OVERHEAD	91407232	82236215	6773257	2216585	
MATERIAL	55730461	49786105	4085899	1717214	
SUBCONTRACT	44235481	9869484	811776	31004104	
GROUP TOTALS HRS	3107857	2799656	230272	72006	
GROUP TOTALS AMT	258783591	201579011	16580269	36612921	
DEPARTMENT TOTALS HRS	11094457	8333387	685431	1896459	
DEPARTMENT TOTALS AMT	1006133976 9	647012919 7	76935849 9	259945566 4	
G. G.O. OVERHEAD (See Below)					
~~SAN DIEGO~~	~~281882 55~~	~~195885 55~~	~~15983 96~~	~~62355 36~~	
GAS N OIL	18	17	1		
GROUP TOTALS AMT	18	17	1		
DEPARTMENT TOTALS AMT	18	17	1		
CONTRACT TOTALS HRS	12909677	8868285	729429	2927588	
CONTRACT TOTALS AMT	1029523142 3	650483481 5	77219509 6	274914419 0	
G.O. OVERHEAD					
SAN DIEGO	281 882 55	195 885 55	15 983 96	62 355 36	
FORT WORTH	58 062 58	24 235 04	33 759 13	17 34	
POMONA	6 529 39	6 023 73	495 46		
TOTAL INC'L. G.O.	103 298 788 75	65 274 492 47	7 772 189 51	27 553 814 60	2

NT OF ACCUMULATED COSTS PAGE B- 3 DATE JAN 63 CONTRACT AF-31174

	GSE F-102	GSE TF-102	MTU
38762	5374068	442021	34072
14330	23788	1958	119
75243	5964193	490563	35975
10295			
0371	206921	17020	1503
38630	11362049	934542	70166
0272	72006	5923	
67959	1673720	137666	
41378	2298	189	
73257	2215585	182175	
85899	1717214	141243	
11776	31004104	2550117	
0272	72006	5923	
80269	36612921	3011390	
5431	1896459	155990	23190
58499	2599455664	213803767	8592642
8XCX6X	6XCX5XCX6X	CXCXCXCXCX	CXCXCXCX7
1			
1			
1			
9429	2927588	240803	143572
95096	2749144190	226114841	42942481
83 96	62 355 36	5 128 51	2 529 17
59 13	17 34		51 07
95 46			10 20
89 51	27 553 814 60	2 266 276 92	432 015 25

JOB ACCTG

DESCRIPTION	TOTAL AIRPLANES	F-102A	TF-102	
		ENGINEERING		
		DESIGN AND LIAISON		
DIR LABOR HRS	11399553	10148461	1251092	
DIR LABOR AMT	351444009	313084336	38359673	
OVERTIME	14928408	13248047	1680361	
OVERHEAD	309254787	275565472	33689315	
MATERIAL	147265615	135538672	11726943	
SUBCONTRACT	55505980	51287527	4218453	
TRAV PER DIEM	19822723	17896480	1926243	
GROUP TOTALS HRS	11399553	10148461	1251092	
GROUP TOTALS AMT	898221522	806620534	91600988	
		EXPERIMENTAL FACTORY		
DIR LABOR HRS	629434	584289	45145	
DIR LABOR AMT	15259451	14169616	1089835	
OVERTIME	573975	532684	41291	
OVERHEAD	16199840	15052809	1147031	
MATERIAL	7850472	7253837	596635	
SUBCONTRACT	1187679	1097415	90264	
TRAV PER DIEM	97995	90547	7448	
GROUP TOTALS HRS	629434	584289	45145	
GROUP TOTALS AMT	41169412	38196908	2972504	
		WIND TUNNEL		
DIR LABOR HRS	13744	13181	563	
DIR LABOR AMT	412040	395995	16045	
OVERTIME	12625	11976	649	
OCCUPANCY HRS	185	185		
OCCUPANCY HRS	176545	176299	246	
MATERIAL	7781	7189	592	
TRAV PER DIEM	2478	2290	188	
GROUP TOTALS HRS	13929	13366	563	
GROUP TOTALS AMT	611469	593749	17720	
		EDWARDS		
DIR LABOR HRS	180839	176537	4302	
DIR LABOR AMT	5066098	4948699	117399	
OVERTIME	106094	105253	841	
OVERHEAD	6218785	6077747	141038	
GROUP TOTALS HRS	180839	176537	4302	
GROUP TOTALS AMT	11390977	11131699	259278	
		HOLLOMAN		
DIR LABOR HRS	148691	145450	3241	

GENERAL DYNAMICS
CONVAIR TF-72D-IV RPT D2639A03

STATEMENT OF ACCUMULA

DESCRIPTION	TOTAL AIRPLANES	F-102A	TF-102
DIR LABOR AMT	4040850	3951947	88903
OVERTIME	153721	153619	102
OVERHEAD	5538432	5421932	116500
MATERIAL	264695	247188	17507
TRAV PER DIEM	2162650	2162650	
GROUP TOTALS HRS	148691	145450	3241
GROUP TOTALS AMT	12160348	11937336	223012
DEPARTMENT TOTALS HRS	12372446	11068103	1304343
DEPARTMENT TOTALS AMT	963553728	868480226	95073502
		CUSTOMER SERVICE	
		SERVICE ENGINEERING	
DIR LABOR HRS	260584	240780	19804
DIR LABOR AMT	8374044	7737617	636427
OVERTIME	21130	19524	1606
OVERHEAD	8707489	8045720	661769
GROUP TOTALS HRS	260584	240780	19804
GROUP TOTALS AMT	17102663	15802861	1299802
		SERVICE PUBLICATION	
DIR LABOR HRS	1800633	1674065	126568
DIR LABOR AMT	44817552	41623096	3194456
OVERTIME	2601074	2417449	183625
OVERHEAD	48094260	44686911	3407349
MATERIAL	13551700	12521768	1029932
TRAV PER DIEM	386890	357605	29285
GROUP TOTALS HRS	1800633	1674065	126568
GROUP TOTALS AMT	109451476	101606829	7844647
		FIELD SERVICE	
DIR LABOR HRS	1089110	1006337	82773
DIR LABOR AMT	36275429	33389841	2885588
OVERTIME	313590	290085	23505
OVERHEAD	8904722	8112963	791759
MATERIAL	1526435	1410426	116009
TRAV PER DIEM	32728655	30241280	2487375
GROUP TOTALS HRS	1089110	1006337	82773
GROUP TOTALS AMT	79748831	73444595	6304236
DEPARTMENT TOTALS HRS	3150327	2921182	229145
DEPARTMENT TOTALS AMT	206302970	190854285	15448685
		TOOLING	
		TOOL ENGINEERING	
DIR LABOR HRS	5748408	5215071	533337

GENERAL DYNAMICS
CONVAIR
TF-72D-IV RPT D2639A03

STATEMENT OF ACCUMULAT

DESCRIPTION	TOTAL AIRPLANES	F-102A	TF-102
DIR LABOR AMT	148562489	134282794	14279695
OVERTIME	5161181	4789192	371989
OVERHEAD	108606424	98401541	10204883
GROUP TOTALS HRS	5748408	5215071	533337
GROUP TOTALS AMT	262330094	237473527	24856567
		TOOL MANUFACTURING	
DIR LABOR HRS	10563757	9232303	1331454
DIR LABOR AMT	244285019	214189658	30095361
OVERTIME	12864388	11543340	1321048
OVERHEAD	253613984	222094753	31519231
SUBCONTRACT	52810254	52810254	
TRAV PER DIEM	205392	190394	14998
MAT N PURC PTS	29133049	26739206	2393843
OTHER COSTS	73016364	67496064	5520300
GROUP TOTALS HRS	10563757	9232303	1331454
GROUP TOTALS AMT	665928450	595063669	70864781
		MANUFACTURING AIDS	
DIR LABOR HRS	2602565	2400960	201605
DIR LABOR AMT	61797741	56996113	4801628
OVERTIME	1444979	1336354	108625
OVERHEAD	65354165	60231915	5122250
MATERIAL	77206216	71432595	5773621
SUBCONTRACT	4782280	4418826	363454
TRAV PER DIEM	63134	58336	4798
PROD TEST EQUP	16893245	15609358	1283887
SOUND SUPRESS	73802139	68193176	5608963
GROUP TOTALS HRS	2602565	2400960	201605
GROUP TOTALS AMT	301343899	278276673	23067226
DEPARTMENT TOTALS HRS	18914730	16848334	2066396
DEPARTMENT TOTALS AMT	1229602443	1110813869	118788574
		MANUFACTURING	
		FACTORY	
DIR LABOR HRS	134899550	124811948	10087602
DIR LABOR AMT	2749212135	2534580781	214631354
OVERTIME	100319618	98099976	2219642
OVERHEAD	3322658190	3063280281	259377909
TRAV PER DIEM	3333	3333	
ALLOCATED HRS	431734	398922	32812
GROUP TOTALS HRS	135331284	125210870	10120414
GROUP TOTALS AMT	6172193276	5695964371	476228905
		MATERIAL AND SUBCONTRACT	
SUBCONTRACT	6712985155	6202835537	510149618

GENERAL DYNAMICS
CONVAIR

TF-72D-IV RPT 02639A03

STATEMENT OF ACCUMULAT

DESCRIPTION	TOTAL AIRPLANES	F-102A	TF-102
MAT N PURC PTS	6749990467	6235505578	514484889
EXCESS USAGE	105723981	97688960	8035021
SURPLUS N OBSO	1168288975	1079493811	88795164
REWORK	148822802	137403024	11419778
PROGRAM COSTS	392645747	362804669	29841078
CANCELLATION	90169678	83192908	6976770
GROUP TOTALS AMT	15368626805	14198924487	1169702318
		OTHER COSTS	
	5602899	5602899	
TRAV PER DIEM	32735801	31534729	1201072
OTHER COSTS	568983519	525329054	43654465
GROUP TOTALS AMT	607322219	562466682	44855537
		FORT WORTH COSTS	
SUBCONTRACT	5440104609	3574375353	1865729256
GROUP TOTALS AMT	5440104609	3574375353	1865729256
		POMONA COSTS	
SUBCONTRACT	166713122	154043954	12669168
GROUP TOTALS AMT	166713122	154043954	12669168
		PALMDALE	
DIR LABOR HRS	30531130	26942208	3588922
DIR LABOR AMT	739780626	647152278	92628348
OVERTIME	44321945	41656672	2665273
OVERHEAD	912918890	802037940	110880950
MATERIAL	61172917	51754196	9418721
TRAV PER DIEM	2072047	1914573	157474
GROUP TOTALS HRS	30531130	26942208	3588922
GROUP TOTALS AMT	1760266425	1544515659	215750766
		PALMDALE INSPECTION	
DIR LABOR HRS	6638373	6134217	504156
DIR LABOR AMT	166633612	153978902	12654710
OVERTIME	10083080	9317229	765851
OVERHEAD	198777778	183682460	15095318
GROUP TOTALS HRS	6638373	6134217	504156
GROUP TOTALS AMT	375494470	346978591	28515879
		INSPECTION	
DIR LABOR HRS	17286115	16233142	1052973
DIR LABOR AMT	395232876	370640332	24592544

GENERAL DYNAMICS
CONVAIR
TF-72D-IV RPT D2639A03

STATEMENT OF ACCUMULA

DESCRIPTION	TOTAL AIRPLANES	F-102A	TF-102
OVERTIME	11357438	10920878	436560
OVERHEAD	432607900	405427508	27180392
TRAV PER DIEM	124319	114870	9449
GROUP TOTALS HRS	17286115	16233142	1052973
GROUP TOTALS AMT	839322533	787103588	52218945
		SHIPPING	
DIR LABOR HRS	627462	579575	47887
DIR LABOR AMT	12616975	11654343	962632
OVERTIME	124205	114765	9440
OVERHEAD	16994108	15697564	1296544
MATERIAL	3099147	2863612	235535
SUBCONTRACT	1121527	1036292	85235
GROUP TOTALS HRS	627462	579575	47887
GROUP TOTALS AMT	33955962	31366576	2589386
		PRODUCTION FLIGHT	
DIR LABOR HRS	360542	332394	28148
DIR LABOR AMT	16440926	15224819	1216107
OVERTIME	299947	287282	12665
OVERHEAD	17656722	16333687	1323035
MATERIAL	259919	31240	228679
TRAV PER DIEM	3631460	3345550	285910
GAS N OIL	119855465	106178211	13677254
GROUP TOTALS HRS	360542	332394	28148
GROUP TOTALS AMT	158144439	141400789	16743650
DEPARTMENT TOTALS HRS	190774906	175432406	15342500
DEPARTMENT TOTALS AMT	3092214386 0	2703714005 0	388500381 0
GAS N OIL	1189	1189	
GROUP TOTALS AMT	1189	1189	
DEPARTMENT TOTALS AMT	1189	1189	
CONTRACT TOTALS HRS	225212409	206270025	18942384
CONTRACT TOTALS AMT	3332160419 0	2920728961 9	411431457 1
G.O. OVERHEAD			
SAN DIEGO	4 286 985 25	3 903 433 28	383 551 97
FORT WORTH	1 180 686 05	775 366 37	405 319 68
POMONA	40 005 58	36 965 19	3 040 39
TOTAL INC'L. G.O.	338 723 718 78	296 788 661 03	41 935 057 75

Out of Order 'B'

Should Be Here

CONTRACT 31174
November 1962

B

	TOTAL MTU SPARES & QSE	TOTAL CONTRACT	PROJECT COST	SPARES F 102	SPARES TF 102	
DIVISION COST	102 952 510 65	436 107 969 69	333 155 459 14	65 048 544 47	7 721 950 96	274
← GO OVERHEAD →						
SAN DIEGO (DEC '61)	281 882 55	4 568 867 80	4 286 985 25	195 885 55	15 983 96	
FORT WORTH	58 062 58	1 238 498 49	1 180 435 91	24 235 04	33 759 13	
POMONA	6 529 39	46 534 97	40 005 58	6 023 73	495 46	
TOTAL (60 MM'S	103 298 986 07	441 961 870 95	338 662 885 88	65 274 688 79	7 772 189 51	275

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TRACT 31174

ember 1962

	B				C	
ES	SPARES	GSE	GSE	MTU	F102	TF 102
	TF 102	F102	TF 102			
4447	7721 950 96	27491 441 90	2261 148 41	429 424 81	292 012 313 43	41 143 145 71
2555	15 983 96	62 355 36	5 128 51	2 529 17	3 903 433 28	383 551 97
3504	33 759 13	17 34		51 07	775 366 37	405 069 54
1373	495 46			10 20	36 965 19	30 040 39
8879	7772 189 51	27553 814 60	2266 276 92	432 015 25	296 728 078 27	41 934 807 61

COPY 2

GENERAL DYNAMICS
CONVAIR TF-72D-IV RPT D2639A04

STATEMENT OF ACC

DESCRIPTION	TOTAL F-102 CONTRACT HOURS & COSTS	TOTAL MTU SPARES & GSE HOURS & COSTS	TOTAL F-102 AIRPLANE HOURS & COSTS
		ENGINEERING	
		DESIGN AND LIAISON	
DIR LABOR HRS	12577092	1177539	11399553
DIR LABOR AMT	384046310	32602301	351444009
OVERTIME	16179635	1251227	14928408
OVERHEAD	342045401	32790614	309254787
MATERIAL	173897857	26632242	147265615
SUBCONTRACT	151736681	96230701	55505980
TRAV PER DIEM	21194987	1372264	19822723
GROUP TOTALS HRS	12577092	1177539	11399553
GROUP TOTALS AMT	1089100871	190879349	898221522
		EXPERIMENTAL FACTORY	
DIR LABOR HRS	629434		629434
DIR LABOR AMT	15259451		15259451
OVERTIME	573975		573975
OVERHEAD	16199840		16199840
MATERIAL	7850472		7850472
SUBCONTRACT	1187679		1187679
TRAV PER DIEM	97995		97995
GROUP TOTALS HRS	629434		629434
GROUP TOTALS AMT	41169412		41169412
		WIND TUNNEL	
DIR LABOR HRS	13744		13744
DIR LABOR AMT	412040		412040
OVERTIME	12625		12625
OCCUPANCY HRS	185		185
OCCUPANCY HRS	176545		176545
MATERIAL	7781		7781
TRAV PER DIEM	2478		2478
GROUP TOTALS HRS	13929		13929
GROUP TOTALS AMT	611469		611469
		EDWARDS	
DIR LABOR HRS	180839		180839
DIR LABOR AMT	5066098		5066098
OVERTIME	106094		106094
OVERHEAD	6218785		6218785
GROUP TOTALS HRS	180839		180839
GROUP TOTALS AMT	11390977		11390977
		HOLLOMAN	
DIR LABOR HRS	148691		148691

DESCRIPTION	TOTAL F-102 CONTRACT HOURS & COSTS	TOTAL MTU SPARES & GSE HOURS & COSTS	TOTAL F-102 AIRPLANE HOURS & COSTS
DIR LABOR AMT	4040850		4040850
OVERTIME	153721		153721
OVERHEAD	5538432		5538432
MATERIAL	264695		264695
TRAV PER DIEM	2162650		2162650
GROUP TOTALS HRS	148691		148691
GROUP TOTALS AMT	12160348		12160348
DEPARTMENT TOTALS HRS	13549985	1177539	12372446
DEPARTMENT TOTALS AMT	1154433077	190879349	963553728
		CUSTOMER SERVICE	
		SERVICE ENGINEERING	
DIR LABOR HRS	260584		260584
DIR LABOR AMT	8374044		8374044
OVERTIME	21130		21130
OVERHEAD	8707489		8707489
GROUP TOTALS HRS	260584		260584
GROUP TOTALS AMT	17102663		17102663
		SERVICE PUBLICATION	
DIR LABOR HRS	2142635	342002	1800633
DIR LABOR AMT	52584062	7766510	44817552
OVERTIME	2889959	288885	2601074
OVERHEAD	50622227	2527967	48094260
MATERIAL	15895502	2343802	13551700
SUBCONTRACT	2724752	2724752	
TRAV PER DIEM	469878	82988	386890
GROUP TOTALS HRS	2142635	342002	1800633
GROUP TOTALS AMT	125186380	15734904	109451476
		FIELD SERVICE	
DIR LABOR HRS	1089110		1089110
DIR LABOR AMT	36275429		36275429
OVERTIME	313590		313590
OVERHEAD	8904722		8904722
MATERIAL	1526435		1526435
TRAV PER DIEM	32728655		32728655
GROUP TOTALS HRS	1089110		1089110
GROUP TOTALS AMT	79748831		79748831
DEPARTMENT TOTALS HRS	3492329	342002	3150327
DEPARTMENT TOTALS AMT	222037874	15734904	206302970
		TOOLING	
		TOOL ENGINEERING	
DIR LABOR HRS	5925735	177327	5748408

GENERAL DYNAMICS
CONVAIR TF-72D-IV RPT D2639A04

STATEMENT OF AC

DESCRIPTION	TOTAL F-102 CONTRACT HOURS & COSTS	TOTAL MTU SPARES & GSE HOURS & COSTS	TOTAL F-102 AIRPLANE HOURS & COSTS
DIR LABOR AMT	154209786	5647297	148562489
OVERTIME	5188780	27599	5161181
OVERHEAD	112680112	4073121	108606991
GROUP TOTALS HRS	5925735	177327	5748408
GROUP TOTALS AMT	272078678	9748017	262330661
		TOOL MANUFACTURING	
DIR LABOR HRS	10682109	118352	10563757
DIR LABOR AMT	247444325	3159306	244285019
OVERTIME	12877782	13394	12864388
OVERHEAD	257139975	3525991	253613984
SUBCONTRACT	52899408	89154	52810254
TRAV PER DIEM	205392		205392
MAT N PURC PTS	30417846	1284797	29133049
OTHER COSTS	82417548	9456724	72960824
GROUP TOTALS HRS	10682109	118352	10563757
GROUP TOTALS AMT	683402276	17529366	665872910
		MANUFACTURING AIDS	
DIR LABOR HRS	2602565		2602565
DIR LABOR AMT	61797741		61797741
OVERTIME	1444979		1444979
OVERHEAD	65354165		65354165
MATERIAL	77206216		77206216
SUBCONTRACT	4782280		4782280
TRAV PER DIEM	63134		63134
PROD TEST EQUP	16893245		16893245
SOUND SUPRESS	73802139		73802139
GROUP TOTALS HRS	2602565		2602565
GROUP TOTALS AMT	301343899		301343899
DEPARTMENT TOTALS HRS	19210409	295679	18914730
DEPARTMENT TOTALS AMT	1256824853	27277383	1229547470
		MANUFACTURING	
		FACTORY	
DIR LABOR HRS	141997910	7098360	134899550
DIR LABOR AMT	2918760541	169548406	2749212135
OVERTIME	102412199	2092581	100319618
OVERHEAD	3532290881	209632478	3322658403
TRAV PER DIEM	3333		3333
SPARES OVHD	53009891	53009891	
ALLOCATED HRS	431745	11	431734
GROUP TOTALS HRS	142429655	7098371	135331284
GROUP TOTALS AMT	6606476845	434283356	6172193489

GENERAL DYNAMICS
CONVAIR
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RPT D2639A04

STATEMENT OF AC

DESCRIPTION	TOTAL F-102 CONTRACT HOURS & COSTS	TOTAL MTU SPARES & GSE HOURS & COSTS	TOTAL F-102 AIRPLANE HOURS & COSTS
MATERIAL AND SUBCONTRACT			
SUBCONTRACT	9148529166	2435544011	6712985155
MAT N PURC PTS	13145727740	6395735330	6749992410
EXCESS USAGE	105723981		105723981
SURPLUS N OBSO	1168290235		1168290235
REWORK	160317505	11494703	148822802
PROGRAM COSTS	392645747		392645747
CANCELLATION	98423870	8193234	90230636
GROUP TOTALS HRS			
GROUP TOTALS AMT	24219658244	8850967278	15368690966
OTHER COSTS			
TRAV PER DIEM	33101374	365573	32735801
OTHER COSTS	594400404	25415769	568984635
GROUP TOTALS HRS			
GROUP TOTALS AMT	627501778	25781342	601720436
FORT WORTH COSTS			
SUBCONTRACT	5862171041	422532325	5439638716
GROUP TOTALS HRS			
GROUP TOTALS AMT	5862171041	422532325	5439638716
POMONA COSTS			
SUBCONTRACT	188433422	21720300	166713122
GROUP TOTALS HRS			
GROUP TOTALS AMT	188433422	21720300	166713122
PALMDALE			
DIR LABOR HRS	30531130		30531130
DIR LABOR AMT	739780626		739780626
OVERTIME	44321945		44321945
OVERHEAD	912918890		912918890
MATERIAL	61172917		61172917
TRAV PER DIEM	2072047		2072047
GROUP TOTALS HRS	30531130		30531130
GROUP TOTALS AMT	1760266425		1760266425
PALMDALE INSPECTION			
DIR LABOR HRS	6638373		6638373
DIR LABOR AMT	166633612		166633612
OVERTIME	10083080		10083080
OVERHEAD	198777778		198777778

GENERAL DYNAMICS
CONVAIR
TP-72D-IV
RPT D2639A04

STATEMENT OF AC

DESCRIPTION	TOTAL F-102 CONTRACT HOURS & COSTS	TOTAL MTU SPARES & GSE HOURS & COSTS	TOTAL F-102 AIRPLANE HOURS & COSTS
GROUP TOTALS HRS	6638373		6638373
GROUP TOTALS AMT	375494470		375494470
		INSPECTION	
DIR LABOR HRS	18174344	888229	17286115
DIR LABOR AMT	417382547	22149671	395232876
OVERTIME	11571854	214416	11357438
OVERHEAD	458509769	25901869	432607900
TRAV PER DIEM	149572	25253	124319
GROUP TOTALS HRS	18174344	888229	17286115
GROUP TOTALS AMT	887613742	48291209	839322533
		SHIPPING	
DIR LABOR HRS	3735319	3107857	627462
DIR LABOR AMT	78480463	65863488	12616975
OVERTIME	671134	546929	124205
OVERHEAD	108401340	91407232	16994108
MATERIAL	58829608	55730461	3099147
SUBCONTRACT	45357008	44235481	1121527
GROUP TOTALS HRS	3735319	3107857	627462
GROUP TOTALS AMT	291739553	257783591	33955962
		PRODUCTION FLIGHT	
DIR LABOR HRS	360542		360542
DIR LABOR AMT	16440926		16440926
OVERTIME	299947		299947
OVERHEAD	17656722		17656722
MATERIAL	259919		259919
TRAV PER DIEM	3631460		3631460
GAS N OIL	119855465		119855465
GROUP TOTALS HRS	360542		360542
GROUP TOTALS AMT	158144439		158144439
DEPARTMENT TOTALS HRS	201869363	11094457	190774906
DEPARTMENT TOTALS AMT	4097749959	10061359401	3091614058
GROUP TOTALS HRS	1206	18	1188
GROUP TOTALS AMT	1206	18	1188
DEPARTMENT TOTALS HRS			
DEPARTMENT TOTALS AMT	1206	18	1188
CONTRACT TOTALS HRS	238122086	12909677	225212409
CONTRACT TOTALS AMT	43610796969	10295251055	33315545914
G. O. OVERHEAD			
SAN DIEGO	4568 867 80	281 88255	4 286 98525
FORT WORTH	1238 498 49	58 06258	1 180 43591
POMONA	46 534 97	6 52939	40 00558
TOTAL INCLUDING G. O. OVERHEAD	441961 870 95	103298 98507	338 662 88588

GENERAL DYNAMICS
CONVAIR

TF-72D-IV RPT D2639A02

STATEMENT OF ACCUMULATED

DESCRIPTION					
		ENGINEERING			
		DESIGN AND LIAISON			
DIR LABOR HRS	1177539	1120	92	975818	802
DIR LABOR AMT	32602301	29892	2459	26711094	2197
OVERTIME	1251227			1018365	83
OVERHEAD	32790614	35587	2927	27177199	2235
MATERIAL	26632242	5465868	438700	18183255	1494
SUBCONTRACT	96230701			64875560	5336
TRAV PER DIEM	1372264			1153073	94
GROUP TOTALS HRS	1177539	1120	92	975818	802
GROUP TOTALS AMT	190879349	5531347	444086	139118546	11441
DEPARTMENT TOTALS HRS	1177539	1120	92	975818	802
DEPARTMENT TOTALS AMT	190879349	5531347	444086	139118546	11441
		CUSTOMER SERVICE			
		SERVICE PUBLICATION			
DIR LABOR HRS	342002	275167	22633	40843	33
DIR LABOR AMT	7766510	6259600	514859	916656	75
OVERTIME	288885	223133	18353	43797	3
OVERHEAD	2527967	2032978	167213	302866	24
MATERIAL	2343802	2163746	177973	1923	
SUBCONTRACT	2724752	2517671	207081		
TRAV PER DIEM	82988	82988			
GROUP TOTALS HRS	342002	275167	22633	40843	33
GROUP TOTALS AMT	15734904	13280116	1085479	1265242	104
DEPARTMENT TOTALS HRS	342002	275167	22633	40843	33
DEPARTMENT TOTALS AMT	15734904	13280116	1085479	1265242	104
		TOOLING			
		TOOL ENGINEERING			
DIR LABOR HRS	177327	156291	12854	7559	6
DIR LABOR AMT	5647297	4960409	408000	257699	21
OVERTIME	27599	25501	2098		
OVERHEAD	4073121	3546117	291672	217441	17
GROUP TOTALS HRS	177327	156291	12854	7559	6
GROUP TOTALS AMT	9748017	8532027	701770	475140	39
		TOOL MANUFACTURING			
DIR LABOR HRS	118352	102320	8419	6909	5

MENT OF ACCUMULATED COSTS PAGE B- 1 DATE NOV 62 CONTRACT AF-31174

G				
LIAISON				
	92	975818	80262	120247
	2459	26711094	2197018	3661838
		1018365	83761	149101
	2927	27177199	2235353	3339548
	438700	18183255	1494623	1049796
		64875560	5336083	26019058
		1153073	94842	124349
	92	975818	80262	120247
	444086	139118546	11441680	34343690
	92	975818	80262	120247
	444086	139118546	11441680	34343690
ERVICE				
BLICATION				
	22633	40843	3359	
	514859	916656	75395	
	18353	43797	3602	
	167213	302866	24910	
	177973	1923	160	
	207081			
	22633	40843	3359	
	1085479	1265242	104067	
	22633	40843	3359	
	1085479	1265242	104067	
NEERING				
	12854	7559	623	
	408000	257699	21189	
	2098			
	291672	217441	17891	
	12854	7559	623	
	701770	475140	39080	
FACTURING				
	8419	6909	569	135

GENERAL DYNAMICS
CONVAIR

TF-72D-IV RPT D2639A02

STATEMENT OF ACCUMULATED

DESCRIPTION					
DIR LABOR AMT	3159306	2725476	224173	190919	1
OVERTIME	13394	12376	1018		
OVERHEAD	3525991	3037895	249870	217243	1
SUBCONTRACT	89154	80019	6301	2619	
MAT N PURC PTS	1284797	758739	54341	435814	3
OTHER COSTS	9456724	747606	69558	7983003	65
GROUP TOTALS HRS	118352	102320	8419	6909	
GROUP TOTALS AMT	17529366	7362111	605261	8829598	72
DEPARTMENT TOTALS HRS	295679	258611	21273	14468	1
DEPARTMENT TOTALS AMT	27277383	15894138	1307031	9304738	76
		MANUFACTURING			
		FACTORY			
DIR LABOR HRS	7098360	4921307	404787	1617532	133
DIR LABOR AMT	169548406	111730037	9189905	44512425	366
OVERTIME	2092581	1611298	132533	309980	2
OVERHEAD	209632478	141482866	11627884	51749483	425
SPARES OVHD	53009891	43093940	3543800	5887869	48
ALLOCATED HRS	11	10	1		
GROUP TOTALS HRS	7098371	4921317	404788	1617532	133
GROUP TOTALS AMT	434283356	297918141	24494122	102459757	842
		MATERIAL AND SUBCONTRACT			
SUBCONTRACT	2435544011	503861019	41443116	1744784759	14351
MAT N PURC PTS	6395735330	5204997340	428120375	700530337	5761
REWORK	11494703	10621109	873594		
CANCELLATION	8193234	254186	7897581	38315	
GROUP TOTALS AMT	8850967278	5719733654	478334666	2445353411	2011
		OTHER COSTS			
TRAV PER DIEM	365573	100788	8289	237003	1
OTHER COSTS	25415769	19504773	1603432	3382301	27
GROUP TOTALS AMT	25781342	19605561	1611721	3619304	29
		FORT WORTH COSTS			
SUBCONTRACT	422532325	178112615	243955197	48222	
GROUP TOTALS AMT	422532325	178112615	243955197	48222	
		POMONA COSTS			
SUBCONTRACT	21720300	20014025	1643894		
GROUP TOTALS AMT	21720300	20014025	1643894		
		INSPECTION			
DIR LABOR HRS	888229	612414	50371	206921	17

EMENT OF ACCUMULATED COSTS PAGE B- 2 DATE NOV 62 CONTRACT AF-31174

224173	190919	15704	3034			
1018						
249870	217243	17868	3115			
6301	2619	215				
54341	435814	35903				
69558	7983003	656557				
8419	6909	569	135			
605261	8829598	726247	6149			
21273	14468	1192	135			
1307031	9304738	765327	6149			
RING						
404787	1617532	133047	21687			
9189905	44512425	3661196	454843			
132533	309980	25497	13273			
11627884	51749483	4256514	515731			
3543800	5887869	484282				
1						
404788	1617532	133047	21687			
24494122	102459757	8427489	983847			
AND SUBCONTRACT						
41443116	1744784759	143510439	1944678			
428120375	700530337	57619385	4467893			
873594						
7897581	38315	3152				
478334666	2445353411	201132976	6412571			
TS						
8289	237003	19493				
1603432	3382301	277877	647386			
1611721	3619304	297370	647386			
H COSTS						
243955197	48222		416291			
243955197	48222		416291			
STS						
1643894			62381			
1643894			62381			
N						
50371	206921	17020	1503			

GENERAL DYNAMICS
CONVAIR

TF-72D-IV RPT D2639A02

STATEMENT OF ACCUMULATED

DESCRIPTION					
DIR LABOR AMT	22149671	15060748	1238762	5374068	44
OVERTIME	214416	174221	14330	23788	
OVERHEAD	25901869	17935895	1475243	5964193	49
TRAV PER DIEM	25253	14958	10295		
GROUP TOTALS HRS	888229	612414	50371	206921	17
GROUP TOTALS AMT	48291209	33185822	2738630	11362049	93
		SHIPPING			
DIR LABOR HRS	3107857	2799656	230272	72006	5
DIR LABOR AMT	65863488	59184143	4867959	1673720	13
OVERTIME	546929	503064	41378	2298	
OVERHEAD	91407232	82236215	6773257	2215585	18
MATERIAL	55730461	49786105	4085899	1717214	14
SUBCONTRACT	44235481	9869484	811776	31004104	255
GROUP TOTALS HRS	3107857	2799656	230272	72006	5
GROUP TOTALS AMT	257783591	201579011	16580269	36612921	301
DEPARTMENT TOTALS HRS	11094457	8333387	685431	1896459	155
DEPARTMENT TOTALS AMT	1006135940 1	647014882 9	76935849 9	259945566 4	21380
	18	17	1		
GROUP TOTALS AMT	18	17	1		
DEPARTMENT TOTALS AMT	18	17	1		
CONTRACT TOTALS HRS	12909677	8868285	729429	2927588	240
CONTRACT TOTALS AMT	1029525105 5	650485444 7	77219509 6	274914419 0	2261
G. O. OVERHEAD					
SAN DIEGO	281 88255	19588555	15 98396	6235536	512
FORT WORTH	58 06258	2423504	33 75913	1734	
POMONA	6 52939	602373	49546		
TOTAL INCLUDING G. O. OVERHEAD	103298 98507	65274 68879	7 772 18951	27553 81460	2 26627

Cost Accounting Department
Cost Analysis Section
14 Dec. 1962

NT OF ACCUMULATED COSTS PAGE B- 3 DATE NOV 62 CONTRACT AF-31174

238762	5374068	442021	34072
14330	23788	1958	119
475243	5964193	490563	35975
10295			
50371	206921	17020	1503
738630	11362049	934542	70166
30272	72006	5923	
867959	1673720	137666	
41378	2298	189	
773257	2215585	182175	
085899	1717214	141243	
811776	31004104	2550117	
30272	72006	5923	
580269	36612921	3011390	
85431	1896459	155990	23190
358499	2599455664	213803767	8592642
1			
1			
1			
29429	2927588	240803	143572
195096	2749144190	226114841	42942481
5 98396	6235536	5128 51	2 52917
3 75913	1734		5107
49546			1020
2 18951	27553 81460	2 266276 92	43201525

GENERAL DYNAMICS
CONVAIR

TF-72D-IV RPT D2639A03

STATEMENT OF ACCUMULAT

DESCRIPTION			
		ENGINEERING	
		DESIGN AND LIAISON	
DIR LABOR HRS	11399553	10148461	1251092
DIR LABOR AMT	351444009	313084336	38359673
OVERTIME	14928408	13248047	1680361
OVERHEAD	309254787	275565472	33689315
MATERIAL	147265615	135538672	11726943
SUBCONTRACT	55505980	51287527	4218453
TRAV PER DIEM	19822723	17896480	1926243
GROUP TOTALS HRS	11399553	10148461	1251092
GROUP TOTALS AMT	898221522	806620534	91600988
		EXPERIMENTAL FACTORY	
DIR LABOR HRS	629434	584289	45145
DIR LABOR AMT	15259451	14169616	1089835
OVERTIME	573975	532684	41291
OVERHEAD	16199840	15052809	1147031
MATERIAL	7850472	7253837	596635
SUBCONTRACT	1187679	1097415	90264
TRAV PER DIEM	97995	90547	7448
GROUP TOTALS HRS	629434	584289	45145
GROUP TOTALS AMT	41169412	38196908	2972504
		WIND TUNNEL	
DIR LABOR HRS	13744	13181	563
DIR LABOR AMT	412040	395995	16045
OVERTIME	12625	11976	649
OCCUPANCY HRS	185	185	
OCCUPANCY HRS	176545	176299	246
MATERIAL	7781	7189	592
TRAV PER DIEM	2478	2290	188
GROUP TOTALS HRS	13929	13366	563
GROUP TOTALS AMT	611469	593749	17720
		EDWARDS	
DIR LABOR HRS	180839	176537	4302
DIR LABOR AMT	5066098	4948699	117399
OVERTIME	106094	105253	841
OVERHEAD	6218785	6077747	141038
GROUP TOTALS HRS	180839	176537	4302
GROUP TOTALS AMT	11390977	11131699	259278
		HOLLOMAN	
DIR LABOR HRS	148691	145450	3241

GENERAL DYNAMICS
CONVAIR

TF-72D-IV RPT D2639A03

STATEMENT OF ACCUMULATED

DESCRIPTION			
DIR LABOR AMT	4040850	3951947	88903
OVERTIME	153721	153619	102
OVERHEAD	5538432	5421932	116500
MATERIAL	264695	247188	17507
TRAV PER DIEM	2162650	2162650	
GROUP TOTALS HRS	148691	145450	3241
GROUP TOTALS AMT	12160348	11937336	223012
DEPARTMENT TOTALS HRS	12372446	11068103	1304343
DEPARTMENT TOTALS AMT	963553728	868480226	95073502
		CUSTOMER SERVICE	
		SERVICE ENGINEERING	
DIR LABOR HRS	260584	240780	19804
DIR LABOR AMT	8374044	7737617	636427
OVERTIME	21130	19524	1606
OVERHEAD	8707489	8045720	661769
GROUP TOTALS HRS	260584	240780	19804
GROUP TOTALS AMT	17102663	15802861	1299802
		SERVICE PUBLICATION	
DIR LABOR HRS	1800633	1674065	126568
DIR LABOR AMT	44817552	41623096	3194456
OVERTIME	2601074	2417449	183625
OVERHEAD	48094260	44686911	3407349
MATERIAL	13551700	12521768	1029932
TRAV PER DIEM	386890	357605	29285
GROUP TOTALS HRS	1800633	1674065	126568
GROUP TOTALS AMT	109451476	101606829	7844647
		FIELD SERVICE	
DIR LABOR HRS	1089110	1006337	82773
DIR LABOR AMT	36275429	33389841	2885588
OVERTIME	313590	290085	23505
OVERHEAD	8904722	8112963	791759
MATERIAL	1526435	1410426	116009
TRAV PER DIEM	32728655	30241280	2487375
GROUP TOTALS HRS	1089110	1006337	82773
GROUP TOTALS AMT	79748831	73444595	6304236
DEPARTMENT TOTALS HRS	3150327	2921182	229145
DEPARTMENT TOTALS AMT	206302970	190854285	15448685
		TOOLING	
		TOOL ENGINEERING	
DIR LABOR HRS	5748408	5215071	533337

DESCRIPTION			
DIR LABOR AMT	148562489	134282794	14279695
OVERTIME	5161181	4789192	371989
OVERHEAD	108606991	98402108	10204883
GROUP TOTALS HRS	5748408	5215071	533337
GROUP TOTALS AMT	262330661	237474094	24856567
		TOOL MANUFACTURING	
DIR LABOR HRS	10563757	9232303	1331454
DIR LABOR AMT	244285019	214189658	30095361
OVERTIME	12864388	11543340	1321048
OVERHEAD	253613984	222094753	31519231
SUBCONTRACT	52810254	52810254	
TRAV PER DIEM	205392	190394	14998
MAT N PURC PTS	29133049	26739206	2393843
OTHER COSTS	72960824	67440524	5520300
GROUP TOTALS HRS	10563757	9232303	1331454
GROUP TOTALS AMT	665872910	595008129	70864781
		MANUFACTURING AIDS	
DIR LABOR HRS	2602565	2400960	201605
DIR LABOR AMT	61797741	56996113	4801628
OVERTIME	1444979	1336354	108625
OVERHEAD	65354165	60231915	5122250
MATERIAL	77206216	71432595	5773621
SUBCONTRACT	4782280	4418826	363454
TRAV PER DIEM	63134	58336	4798
PROD TEST EQUP	16893245	15609358	1283887
SOUND SUPRESS	73802139	68193176	5608963
GROUP TOTALS HRS	2602565	2400960	201605
GROUP TOTALS AMT	301343899	278276673	23067226
DEPARTMENT TOTALS HRS	18914730	16848334	2066396
DEPARTMENT TOTALS AMT	1229547470	1110758896	118788574
		MANUFACTURING	
		FACTORY	
DIR LABOR HRS	134899550	124811948	10087602
DIR LABOR AMT	2749212135	2534580781	214631354
OVERTIME	100319618	98099976	2219642
OVERHEAD	3322658403	3063280494	259377909
TRAV PER DIEM	3333	3333	
ALLOCATED HRS	431734	398922	32812
GROUP TOTALS HRS	135331284	125210870	10120414
GROUP TOTALS AMT	6172193489	5695964584	476228905
		MATERIAL AND SUBCONTRACT	
SUBCONTRACT	6712985155	6202835537	510149618

GENERAL DYNAMICS
CONVAIR

TF-72D-IV RPT D2639A03

STATEMENT OF ACCUMULATED

▼ DESCRIPTION			
MAT N PURC PTS	6749992410	6235507521	514484889
EXCESS USAGE	105723981	97688960	8035021
SURPLUS N OBSO	1168290235	1079495071	88795164
REWORK	148822802	137403024	11419778
PROGRAM COSTS	392645747	362804669	29841078
CANCELLATION	90230636	83253866	6976770
GROUP TOTALS AMT	15368690966	14198988648	1169702318
		OTHER COSTS	
TRAV PER DIEM	32735801	31534729	1201072
OTHER COSTS	568984635	525330170	43654465
GROUP TOTALS AMT	601720436	556864899	44855537
		FORT WORTH COSTS	
SUBCONTRACT	5439638716	3573909460	1865729256
GROUP TOTALS AMT	5439638716	3573909460	1865729256
		POMONA COSTS	
SUBCONTRACT	166713122	154043954	12669168
GROUP TOTALS AMT	166713122	154043954	12669168
		PALMDALE	
DIR LABOR HRS	30531130	26942208	3588922
DIR LABOR AMT	739780626	647152278	92628348
OVERTIME	44321945	41656672	2665273
OVERHEAD	912918890	802037940	110880950
MATERIAL	61172917	51754196	9418721
TRAV PER DIEM	2072047	1914573	157474
GROUP TOTALS HRS	30531130	26942208	3588922
GROUP TOTALS AMT	1760266425	1544515659	215750766
		PALMDALE INSPECTION	
DIR LABOR HRS	6638373	6134217	504156
DIR LABOR AMT	166633612	153978902	12654710
OVERTIME	10083080	9317229	765851
OVERHEAD	198777778	183682460	15095318
GROUP TOTALS HRS	6638373	6134217	504156
GROUP TOTALS AMT	375494470	346978591	28515879
		INSPECTION	
DIR LABOR HRS	17286115	16233142	1052973
DIR LABOR AMT	395232876	370640332	24592544
OVERTIME	11357438	10920878	436560

GENERAL DYNAMICS
CONVAIR

TF-72D-IV RPT 02639A03

STATEMENT OF ACCUMULATE

DESCRIPTION			
OVERHEAD	432607900	405427508	27180392
TRAV PER DIEM	124319	114870	9449
GROUP TOTALS HRS	17286115	16233142	1052973
GROUP TOTALS AMT	839322533	787103588	52218945
		SHIPPING	
DIR LABOR HRS	627462	579575	47887
DIR LABOR AMT	12616975	11654343	962632
OVERTIME	124205	114765	9440
OVERHEAD	16994108	15697564	1296544
MATERIAL	3099147	2863612	235535
SUBCONTRACT	1121527	1036292	85235
GROUP TOTALS HRS	627462	579575	47887
GROUP TOTALS AMT	33955962	31366576	2589386
		PRODUCTION FLIGHT	
DIR LABOR HRS	360542	332394	28148
DIR LABOR AMT	16440926	15224819	1216107
OVERTIME	299947	287282	12665
OVERHEAD	17656722	16333687	1323035
MATERIAL	259919	31240	228679
TRAV PER DIEM	3631460	3345550	285910
GAS N OIL	119855465	106178211	13677254
GROUP TOTALS HRS	360542	332394	28148
GROUP TOTALS AMT	158144439	141400789	16743650
DEPARTMENT TOTALS HRS	190774906	175432406	15342500
DEPARTMENT TOTALS AMT	30916140558	27031136748	3885003810
	1188	1188	
GROUP TOTALS AMT	1188	1188	
DEPARTMENT TOTALS AMT	1188	1188	
CONTRACT TOTALS HRS	2252124409	2062700025	189423884
CONTRACT TOTALS AMT	33315545914	29201231343	4114314571
G. O. OVERHEAD			
SAN DIEGO	4 286 98525	3903 433 28	383 55197
FORT WORTH	1 180 43591	775 366 37	405 06954
POMONA	40 00558	36 965 19	3 04039
TOTAL INCLUDING G. O. OVERHEAD	338662 88588	296 728078 27	41 934 80761

Cost Accounting Department
Cost Analysis Section
14 Dec. 1962

CONVAIR
SAN DIEGO TF-72-C-IV

STATEMENT OF ACCUM

DESCRIPTION	TOTAL CONTRACT COST	ACTUAL PROJECT COST	SPARES F-102	SPARES TF-102	G.S.E. F-102	G.S.E. TF
						ENGINEERI
						DESIGN AN
DIR LABOR HRS	12577092	11399553	1120	92	975818	802
DIR LABOR AMT	384046310	351444009	29892	2459	26711094	2197
OVERTIME	16179635	14928408			1018365	83
OVERHEAD	342045401	309254787	35587	2927	27177199	2235
MATERIAL	173897857	147265615	5465868	438700	18183255	1494
SUBCONTRACT	151736681	55505980			64875560	5336
TRAV PER DIEM	21194987	19822723			1153073	94
GROUP TOTAL	1089100871	898221522	5531347	444086	139118546	1144
						EXPERIMEN
DIR LABOR HRS	629434	629434				
DIR LABOR AMT	15259451	15259451				
OVERTIME	573975	573975				
OVERHEAD	16199840	16199840				
MATERIAL	8070953	8070953				
SUBCONTRACT	1187679	1187679				
TRAV PER DIEM	97995	97995				
GROUP TOTAL	41389893	41389893				
						WIND TUNN
DIR LABOR HRS	13744	13744				
DIR LABOR AMT	412040	412040				
OVERTIME	12625	12625				
OCCUPANCY HRS	185	185				
OVERHEAD	176545	176545				
MATERIAL	7781	7781				
TRAV PER DIEM	2478	2478				
GROUP TOTAL	611469	611469				
						EDWARDS
DIR LABOR HRS	180839	180839				
DIR LABOR AMT	5066098	5066098				
OVERTIME	106094	106094				
OVERHEAD	6218785	6218785				
GROUP TOTAL	11390977	11390977				
						HOLLOMAN
DIR LABOR HRS	148691	148691				
DIR LABOR AMT	4040850	4040850				
OVERTIME	153721	153721				
OVERHEAD	5538432	5538432				

OF ACCUMULATED COSTS

Page 1 of 5 DATE JAN 62 CONTRACT AF-31174

02	G.S.E. TF-102	M. T. U.	F-102	TF-102
	ENGINEERING			
	DESIGN AND LIAISON			
8	80262	120247	10148461	1251092
94	2197018	3661838	313084336	38359673
65	83761	149101	13248047	1680361
99	2235353	3339548	275565472	33689315
55	1494623	1049796	135538672	11726943
60	5336083	26019058	51287527	4218453
73	94842	124349	17896480	1926243
46	11441680	34343690	806620534	91600988
	EXPERIMENTAL FACTORY			
			584289	45145
			14169616	1089835
			532684	41291
			15052809	1147031
			7457561	613392
			1097415	90264
			90547	7448
			38400632	2989261
	WIND TUNNEL			
			13181	563
			395995	16045
			11976	649
			185	
			176299	246
			7189	592
			2290	188
			593749	17720
	EDWARDS			
			176537	4302
			494699	117399
			105253	841
			607747	141038
			1113169 9	259278
	HOLLOMAN			
			145450	3241
			3951947	88903
			153619	102
			5421932	116500

CONVAIR
SAN DIEGO TF-72-C-IV

STATEMENT OF ACCUM

DESCRIPTION	TOTAL CONTRACT COST	ACTUAL PROJECT COST	SPARES F-102	SPARES TF-102	G.S. E.F-102	G.S.E. TF
MATERIAL	264695	264695				
TRAV PER DIEM	2162650	2162650				
GROUP TOTAL	12160348	12160348				
DEPT HOURS TOT	13549985	12372446	1120	92	975818	802
DEPT COSTS TOT	1154653558	963774209	5531347	444086	139118546	1144
						CUSTOMER
						SERVICE E
DIR LABOR HRS	260584	260584				
DIR LABOR AMT	8374044	8374044				
OVERTIME	21130	21130				
OVERHEAD	8707489	8707489				
GROUP TOTAL	17102663	17102663				
						SERVICE
DIR LABOR HRS	2142635	1800633	275167	22633	40843	33
DIR LABOR AMT	52584062	44817552	6259600	514859	916656	75
OVERTIME	2889959	2601074	223133	18353	43797	3
OVERHEAD	50622227	48094260	2032978	167213	302866	24
MATERIAL	15895502	13551700	2163746	177973	1923	
SUBCONTRACT	2724752		2517671	207081		
TRAV PER DIEM	469878	386890	82988			
GROUP TOTAL	125186380	109451476	13280116	1085479	1265242	104
						FIELD SER
DIR LABOR HRS	1089110	1089110				
DIR LABOR AMT	36275429	36275429				
OVERTIME	313590	313590				
OVERHEAD	8904722	8904722				
MATERIAL	1526435	1526435				
TRAV PER DIEM	32728655	32728655				
GROUP TOTAL	79748831	79748831				
DEPT HOURS TOT	3492329	3150327	275167	22633	40843	33
DEPT COSTS TOT	222037874	206302970	13280116	1085479	1265242	104
						TOOLING
						TOOL ENGI
DIR LABOR HRS	5924775	5747448	156291	12854	7559	6
DIR LABOR AMT	154182364	148535067	4960409	408000	257699	21
OVERTIME	5188780	5161181	25501	2098		
OVERHEAD	112630087	108556966	3546117	291672	217441	17
GROUP TOTAL	272001231	262253214	8532027	701770	475140	39

ACCUMULATED COSTS

Page 2 of 5

DATE JAN 62 CONTRACT AF-31174

	G.S.E. TF-102	M. T. U.	F-102	TF-102
			247188	17507
			2162650	
			11937336	223012
	80262	120247	11068103	1304343
	11441680	34343690	868683950	95090259
CUSTOMER SERVICE				
SERVICE ENGINEERING				
			240780	19804
			7737617	636427
			19524	1606
			8045720	661769
			15802861	1299802
SERVICE PUBLICATION				
	3359		1674065	126568
	75395		41623096	3194456
	3602		2417449	183625
	24910		44686911	3407349
	160		12521768	1029932
			357605	29285
	104067		101606829	7844647
FIELD SERVICE				
			1006337	82773
			33389841	2885588
			290085	23505
			8112963	791759
			1410426	116009
			30241280	2487375
			73444595	6304236
	3359		2921182	229145
	104067		190854285	15448685
TOOLING				
TOOL ENGINEERING				
	623		5214111	533337
	21189		134255372	14279695
			4789192	371989
	17891		98352083	10204883
	39080		237396647	24856567

CONVAIR
SAN DIEGO TF-72-C-IV

STATEMENT OF ACCUM

▼ DESCRIPTION	TOTAL CONTRACT COST	ACTUAL PROJECT COST	SPARES F-102	SPARES TF-102	G. S. E. F-102	G.S.E.TF
						TOOL MANU
DIR LABOR HRS	10682109	10563757	102320	8419	6909	5
DIR LABOR AMT	247444325	244285019	2725476	224173	190919	15
OVERTIME	12877782	12864388	12376	1018		
OVERHEAD	257139975	253613984	3037895	249870	217243	17
SUBCONTRACT	52899408	52810254	80019	6301	2619	
TRAV PER DIEM	205392	205392				
MAT N PURC PTS	30417846	29133049	758739	54341	435814	35
OTHER COSTS	82417548	72960824	747606	69558	7983003	656
GROUP TOTAL	683402276	665872910	7362111	605261	8829598	726
						MANUFACTU
DIR LABOR HRS	2602565	2602565				
DIR LABOR AMT	61797741	61797741				
OVERTIME	1444979	1444979				
OVERHEAD	65354165	65354165				
MATERIAL	77206216	77206216				
SUBCONTRACT	4782280	4782280				
TRAV PER DIEM	63134	63134				
PROD TEST EQUP	16893245	16893245				
SOUND SUPRESS	73802139	73802139				
GROUP TOTAL	301343899	301343899				
DEPT HOURS TOT	19209449	18913770	258611	21273	14468	11
DEPT COSTS TOT	1256747406	1229470023	15894138	1307031	9304738	765
						MANUFACTU
						FACTORY
DIR LABOR HRS	141997530	134899190	4921289	404785	1617532	1330
DIR LABOR AMT	2918749910	2749202073	111729511	9189862	44512425	3661
OVERTIME	102412199	100319618	1611298	132533	309980	25
OVERHEAD	3532271079	3322639643	141481903	11627805	51749483	4256
SPARES OVHD	52958864		43064367	3542091	5869624	482
ALLOCATED HRS	431745	431734	10	1		
GROUP TOTAL	6606392052	6172161334	297887079	24492291	102441512	8425
						MATERIAL
SUBCONTRACT	9148532781	6712988770	503861019	41443116	1744784759	14351
MAT N PURC PTS	13145692378	6750015815	5204910168	428106750	700569173	57622
EXCESS USAGE	106113054	106113054				
SURPLUS N OBSO	1164860000	1164860000				
REWORK	160317505	148822802	10621109	873594		
PROGRAM COSTS	392645747	392645747				
CANCELLATION	102364052	94170818	254186	7897581	38315	3
GROUP TOTAL	24220525517	15369617006	5719646482	478321041	2445392247	201136

F ACCUMULATED COSTS Page 3 of 5 DATE JAN 62 CONTRACT AF-31174

02 G.S.E. TF-102	M. T. U.	F-102	TF-102
TOOL MANUFACTURING			
569	135	9232303	1331454
15704	3034	214189658	30095361
		11543340	1321048
17868	3115	222094753	31519231
215		52810254	
		190394	14998
35903		26739206	2393843
656557		67440524	5520300
726247	6149	595008129	70864781
MANUFACTURING AIDS			
		2400960	201605
		56996113	4801628
		1336354	108625
		60231915	5122250
		71432595	5773621
		4418826	363454
		58336	4798
		15609358	1283887
		68193176	5608963
		278276673	23067226
1192	135	16847374	2066396
765327	6149	1110681449	118788574
MANUFACTURING			
FACTORY			
133047	21687	124811588	10087602
3661196	454843	2534570719	214631354
25497	13273	98099976	2219642
4256514	515731	3063261734	259377909
482782			
		398922	32812
8425989	983847	5695932429	476228905
MATERIAL AND SUBCONTRACT			
143510439	1944678	6202838877	510149893
57622579	4467893	6235522486	514493329
		98048463	8064591
		1076330638	88529362
		137403024	11419778
		362804669	29841078
3152		86998973	7171845
201136170	6412571	14199947130	1169669876

CONVAIR
SAN DIEGO TF-72-C-IV

STATEMENT OF ACCUM

▼ DESCRIPTION	TOTAL CONTRACT COST	ACTUAL PROJECT COST	SPARES F-102	SPARES TF-102	G.S.E. F-102	G.S.E. TF-
						OTHER COS
TRAV PER DIEM	32895022	32529449	100788	8289	237003	19
OTHER COSTS	599088583	573661285	19509762	1604694	3387095	27
GROUP TOTAL	631983605	606190734	19610550	1612983	3624098	29
						FORT WORT
SUBCONTRACT	5861935883	5439376025	178124234	243971111	48222	
GROUP TOTAL	5861935883	5439376025	178124234	243971111	48222	
						POMONA CO
SUBCONTRACT	188433422	166713122	20014025	1643894		
GROUP TOTAL	188433422	166713122	20014025	1643894		
						PALMDALE
DIR LABOR HRS	30531130	30531130				
DIR LABOR AMT	739780626	739780626				
OVERTIME	44321945	44321945				
OVERHEAD	912918890	912918890				
MATERIAL	61172917	61172917				
TRAV PER DIEM	2072047	2072047				
GROUP TOTAL	1760266425	1760266425				
						PALMDALE
DIR LABOR HRS	6638373	6638373				
DIR LABOR AMT	166633612	166633612				
OVERTIME	10083080	10083080				
OVERHEAD	198777778	198777778				
GROUP TOTAL	375494470	375494470				
						INSPECTI
DIR LABOR HRS	18174344	17286115	612414	50371	206921	17
DIR LABOR AMT	417382547	395232876	15060748	1238762	5374068	44
OVERTIME	11571854	11357438	174221	14330	23788	
OVERHEAD	458509769	432607900	17935895	1475243	5964193	49
TRAV PER DIEM	149572	124319	14958	10295		
GROUP TOTAL	887613742	839322533	33185822	2738630	11362049	93
						SHIPPING
DIR LABOR HRS	3735319	627462	2799656	230272	72006	5
DIR LABOR AMT	78480463	12616975	59184143	4867959	1673720	13
OVERTIME	671134	124205	503064	41378	2298	
OVERHEAD	108401340	16994108	82236215	6773257	2215585	18
MATERIAL	58829608	3099147	49786105	4085899	1717214	14
SUBCONTRACT	45357008	1121527	9869484	811776	31004104	255

F ACCUMULATED COSTS Page 4 of 5 DATE JAN 62 CONTRACT AF-31174

2	G.S.E. TF-102	M. T. U.	F-102	TF-102
	OTHER COSTS			
3	19493		31340980	1188469
5	278361	647386	529650911	44010374
8	297854	647386	560991891	45198843
	FORT WORTH COSTS			
2		416291	3573670149	1865705876
2		416291	3573670149	1865705876
	POMONA COSTS			
		62381	154043954	12669168
		62381	154043954	12669168
	PALMDALE			
			26942208	3588922
			647152278	92628348
			41656672	2665273
			802037940	110880950
			51754196	9418721
			1914573	157474
			1544515659	215750766
	PALMDALE INSPECTION			
			6134217	504156
			153978902	12654710
			9317229	765851
			183682460	15095318
			346978591	28515879
	INSPECTION			
	17020	1503	16233142	1052973
8	442021	34072	370640332	24592544
8	1958	119	10920878	436560
3	490563	35975	405427508	27180392
			114870	9449
9	934542	70166	787103588	52218945
	SHIPPING			
	5923		579575	47887
0	137666		11654343	962632
8	189		114765	9440
5	182175		15697564	1296544
4	141243		2863612	235535
4	2550117		1036292	85235

CONVAIR
SAN DIEGO TF-72-C-IV

STATEMENT OF ACCUM

▼ DESCRIPTION	TOTAL CONTRACT COST	ACTUAL PROJECT COST	SPARES F-102	SPARES TF-102	G.S.E. F-102	G.S.E. TF-
~~GROUP TOTAL~~	~~291739553~~	~~33955962~~	~~201579011~~	~~16580269~~	~~36612921~~	~~3011~~
						PRODUCTIO
DIR LABOR HRS	360542	360542				
DIR LABOR AMT	16440926	16440926				
OVERTIME	299947	299947				
OVERHEAD	17656722	17656722				
MATERIAL	259919	259919				
TRAV PER DIEM	3631460	3631460				
GAS N OIL	119855465	119855465				
GROUP TOTAL	158144439	158144439				
DEPT HOURS TOT	201868983	190774546	8333369	685429	1896459	1559
DEPT COSTS TOT	409825291 08	309212420 50	64700472 03	7693602 19	25994810 49	213805
CONT HOURS TOT	238120746	225211089	8868267	729427	2927588	2408
CONT COST TOT	436159679 46	333207892 52	65047528 04	7721968 15	27491695 75	226117
G. O. OVERHEAD						
SAN DIEGO	4568 867 80	4286 985 25	195 885 55	15 983 96	62 355 36	512
FORTH WORTH	1238 498 49	1180 435 91	24 235 04	33 759 13	17 34	
POMONA	46 534 97	40 005 58	6 023 73	495 46		
TOTAL INCLUDING G. O. OVERHEAD	442013 580 72	338715 319 26	65273 672 36	7772 206 70	27554 068 45	2266 29

Labor Cut-off 28 January 1962

Accounting Department
Cost Accounting Section
Plant 11, Ext. 564

S.D.R. 93-6-16

12 February 1962

Distribution

Evans, R. D.
Fetterly, R. E.
~~Richman, J. L.~~
Jodka, J. J.

ACCUMULATED COSTS

Page 5 of 5 DATE JAN 62 CONTRACT AF-31174

G.S.E. T^F-102	M. T. U.	F-102	TF-102
3011390		31366576	2589386
PRODUCTION FLIGHT			
		332394	28148
		15224819	1216107
		287282	12665
		16333687	1323035
		31240	228679
		3345550	285910
		106178211	13677254
		141400789	16743650
155990	23190	175432046	15342500
213805945	8592642	27035950756	3885291294
240803	143572	206268705	18942384
226117019	42942481	29206170440	4114618812
5128 51	2 529 17	3903 433 28	383 551 97
	51 07	775 366 37	405 069 54
	10 20	36 965 19	3 040 39
2266 298 70	432 015 25	296 777 469 24	41 937 850 02

CONVAIR
SAN DIEGO TF-72-C-IV

STATEMENT OF ACCUM

DESCRIPTION	TOTAL CONTRACT COST	ACTUAL PROJECT COST	SPARES F 102	SPARES TF102	G.S.E. F102	G.S.E. TF1
						ENGINEERI
						DESIGN AN
DIR LABOR HRS	12577092	11399553	1120	92	975818	802
DIR LABOR AMT	384046310	351444009	29892	2459	26711094	2197
OVERTIME	16179635	14928408			1018365	83
OVERHEAD	342045401	309254787	35587	2927	27177199	2235
MAT OTHER ALLO	174018094	147385852	5465868	438700	18183255	1494
SUBCONTRACT	151736681	55505980			64875560	5336
TRAV PER DIEM	21194987	19822723			1153073	94
GROUP TOTAL	1089221108	898341759	5531347	444086	139118546	11441
						EXPERIMEN
DIR LABOR HRS	629434	629434				
DIR LABOR AMT	15259451	15259451				
OVERTIME	573975	573975				
OVERHEAD	16199840	16199840				
MAT OTHER ALLO	8085085	8085085				
SUBCONTRACT	1187679	1187679				
TRAV PER DIEM	97995	97995				
GROUP TOTAL	41404025	41404025				
						WIND TUNN
DIR LABOR HRS	13744	13744				
DIR LABOR AMT	412040	412040				
OVERTIME	12625	12625				
OCCUPANCY HRS	185	185				
OVERHEAD	176545	176545				
MAT OTHER ALLO	7781	7781				
TRAV PER DIEM	2478	2478				
GROUP TOTAL	611469	611469				
						EDWARDS
DIR LABOR HRS	180839	180839				
DIR LABOR AMT	5066098	5066098				
OVERTIME	106094	106094				
OVERHEAD	6218785	6218785				
GROUP TOTAL	11390977	11390977				
						HOLLOMAN
DIR LABOR HRS	148691	148691				
DIR LABOR AMT	4040850	4040850				
OVERTIME	153721	153721				
OVERHEAD	5538432	5538432				

F ACCUMULATED COSTS Page 1 of 5 DATE OCT 61 CONTRACT AF-31174

	G.S.E. TF102	M. T. U.	F-102	TF-102
	ENGINEERING			
	DESIGN AND LIAISON			
3	80262	120247	10148461	1251092
94	2197018	3661838	313084336	38359673
55	83761	149101	13248047	1680361
99	2235353	3339548	275565472	33689315
55	1494623	1049796	135649771	11736081
60	5336083	26019058	51287527	4218453
73	94842	124349	17896480	1926243
66	11441680	34343690	806731633	91610126
	EXPERIMENTAL FACTORY			
			584289	45145
			14169616	1089835
			532684	41291
			15052809	1147031
			7470619	614466
			1097415	90264
			90547	7448
			38413690	2990335
	WIND TUNNEL			
			13181	563
			395995	16045
			11976	649
			185	
			176299	246
			7189	592
			2290	188
			593749	17720
	EDWARDS			
			176537	4302
			4948699	117399
			105253	841
			6077747	141038
			11131699	259278
	HOLLOMAN			
			145450	3241
			3951947	88903
			153619	102
			5421932	116500

CONVAIR
SAN DIEGO TF-72-C-IV

STATEMENT OF ACCUM

DESCRIPTION	TOTAL CONTRACT COST	ACTUAL PROJECT COST	SPARES F102	SPARES TF102	G.S.E. F102	G.S.E. TF1
MAT OTHER ALLO	264695	264695				
TRAV PER DIEM	2162650	2162650				
GROUP TOTAL	12160348	12160348				
DEPT HOURS TOT	13549985	12372446	1120	92	975818	802
DEPT COSTS TOT	1154787927	963908578	5531347	444086	139118546	11441
						CUSTOMER
						SERVICE E
DIR LABOR HRS	260584	260584				
DIR LABOR AMT	8374044	8374044				
OVERTIME	21130	21130				
OVERHEAD	8707489	8707489				
GROUP TOTAL	17102663	17102663				
						SERVICE P
DIR LABOR HRS	2142635	1800633	275167	22633	40843	33
DIR LABOR AMT	52584062	44817552	6259600	514859	916656	75
OVERTIME	2889959	2601074	223133	18353	43797	3
OVERHEAD	50622227	48094260	2032978	167213	302866	24
MAT OTHER ALLO	15895502	13551700	2163746	177973	1923	
SUBCONTRACT	2724752		2517671	207081		
TRAV PER DIEM	469878	386890	82988			
GROUP TOTAL	125186380	109451476	13280116	1085479	1265242	104
						FIELD SER
DIR LABOR HRS	1089110	1089110				
DIR LABOR AMT	36275429	36275429				
OVERTIME	313590	313590				
OVERHEAD	8904722	8904722				
MAT OTHER ALLO	1572435	1572435				
TRAV PER DIEM	32728655	32728655				
GROUP TOTAL	79794831	79794831				
DEPT HOURS TOT	3492329	3150327	275167	22633	40843	31
DEPT COSTS TOT	222083874	206348970	13280116	1085479	1265242	10
						TOOLING
						TOOL ENG
DIR LABOR HRS	5924775	5747448	156291	12854	7559	
DIR LABOR AMT	154182364	148535067	4960409	408000	257699	2
OVERTIME	5188780	5161181	25501	2098		
OVERHEAD	112630087	108556966	3546117	291672	217441	1
GROUP TOTAL	272001231	262253214	8532027	701770	475140	3

F ACCUMULATED COSTS Page 2 of 5 DATE OCT 61 CONTRACT AF-31174

	G.S.E. TF102	M. T. U.	F-102	TF-102
			247188	17507
			2162650	
			11937336	223012
	80262	120247	11068103	1304343
6	11441680	34343690	868808107	95100471
	CUSTOMER SERVICE			
	SERVICE ENGINEERING			
			240780	19804
			7737617	636427
			19524	1606
			8045720	661769
			15802861	1299802
	SERVICE PUBLICATION			
	3359		1674065	126568
66	75395		41623096	3194456
97	3602		2417449	183625
66	24910		44686911	3407349
23	160		12521768	1029932
			357605	29285
2	104067		101606829	7844647
	FIELD SERVICE			
			1006337	82773
			33389841	2885588
			290085	23505
			8112963	791759
			1452930	119505
			30241280	2487375
			73487099	6307732
3	3359		2921182	229145
42	104067		190896789	15452181
	TOOLING			
	TOOL ENGINEERING			
9	623		5214111	533337
99	21189		134255372	14279695
			4789192	371989
41	17891		98352083	10204883
40	39080		237396647	24856567

CONVAIR
SAN DIEGO TF-72-C-IV

STATEMENT OF ACCU

DESCRIPTION	TOTAL CONTRACT COST	ACTUAL PROJECT COST	SPARES F102	SPARES TF 102	G.S.E. F 102	G.S.E.
						TOOL MA
DIR LABOR HRS	10682109	10563757	102320	8419	6909	
DIR LABOR AMT	247444325	244285019	2725476	224173	190919	
OVERTIME	12877782	12864388	12376	1018		
OVERHEAD	257139920	253613929	3037895	249870	217243	
SUBCONTRACT	52899408	52810254	80019	6301	2619	
TRAV PER DIEM	205392	205392				
MAT N PURC PTS	30417846	29133049	758739	54341	435814	
OTHER COSTS	82417548	72960824	747606	69558	7983003	6
GROUP TOTAL	683402221	665872855	7362111	605261	8829598	7
						MFG AID
DIR LABOR HRS	2602565	2602565				
DIR LABOR AMT	61797741	61797741				
OVERTIME	1444979	1444979				
OVERHEAD	65354110	65354110				
MAT OTHER ALLO	77206216	77206216				
SUBCONTRACT	4782280	4782280				
TRAV PER DIEM	63134	63134				
PROD TEST EQUP	16893245	16893245				
SOUND SUPRESS	73802139	73802139				
GROUP TOTAL	301343844	301343844				
DEPT HOURS TOT	19209449	18913770	258611	21273	14468	
DEPT COSTS TOT	1256747296	1229469913	15894138	1307031	9304738	7
						MANUFAC
						FACTORY
DIR LABOR HRS	141997530	134899190	4921289	404785	1617532	19
DIR LABOR AMT	2918749910	2749202073	111729511	9189862	44512425	36
OVERTIME	102412199	100319618	1611298	132533	309980	
OVERHEAD	3532271011	3322639643	141481840	11627800	51749483	42
SPARES OVHD	52913160		43023165	3538702	5868596	4
ALLOCATED HRS	431745	431734	10	1		
GROUP TOTAL	6606346280	6172161334	297845814	24488897	102440484	84
						MATERIA
SUBCONTRACT	9148182175	6712988770	503861019	41443116	1744460799	1434
MAT N PURC PTS	13145435375	6749637505	5205026889	428116350	700564540	576
EXCESS USAGE	106113054	106113054				
SURPLUS N OBSO	1164856770	1164856770				
REWORK	160317505	148822802	10621109	873594		
PROGRAM COSTS	389649931	389649931				
CANCELLATION	105641954	97448720	254186	7897581	38315	
GROUP TOTAL	24220196764	15369517552	5719763203	478330641	2445063654	2011

ACCUMULATED COSTS

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G.S.E. TF 102	M. T. U.	F-102	TF 102
TOOL MANUFACTURING			
569	135	9232303	1331454
15704	3034	214189658	30095361
		11543340	1321048
17868	3115	222094702	31519227
215		52810254	
		190394	14998
35903		26739206	2393843
656557		67440524	5520300
726247	6149	595008078	70864777
MFG AIDS N TOOL HANDLING			
		2400960	201605
		56996113	4801628
		1336354	108625
		60231864	5122246
		71432595	5773621
		4418826	363454
		58336	4798
		15609358	1283887
		68193176	5608963
		278276622	23067222
1192	135	16847374	2066396
765327	6149	1110681347	118788566
MANUFACTURING			
FACTORY			
133047	21687	124811588	10087602
3661196	454843	2534570719	214631354
25497	13273	98099976	2219642
4256514	515731	3063261734	259377909
482697			
		398922	32812
8425904	983847	5695932429	476228905
MATERIAL AND SUBCONTRACT			
143483793	1944678	6202838877	510149893
57622198	4467893	6235172928	514464577
		98048463	8064591
		1076327653	88529117
		137403024	11419778
		360036535	29613396
3152		90027754	7420966
201109143	6412571	14199855234	1169662318

CONVAIR
SAN DIEGO TF-72-C-IV

STATEMENT OF ACCU

▼ DESCRIPTION	TOTAL CONTRACT COST	ACTUAL PROJECT COST	SPARES F 102	SPARES TF 102	G.S.E. F 102	G.S.E. TF
						OTHER CO
TRAV PER DIEM	32895022	32529449	100788	8289	237003	1
OTHER COSTS	599109271	573692085	19499217	1603827	3388296	27
GROUP TOTAL	632004293	606221534	19600005	1612116	3625299	29
						FORT WOR
SUBCONTRACT	5861935821	5439375963	178124234	243971111	48222	
GROUP TOTAL	5861935821	5439375963	178124234	243971111	48222	
						POMONA C
SUBCONTRACT	188448657	166728357	20014025	1643894		
GROUP TOTAL	188448657	166728357	20014025	1643894		
						PALMDALE
DIR LABOR HRS	30531130	30531130				
DIR LABOR AMT	739780626	739780626				
OVERTIME	44321945	44321945				
OVERHEAD	912918890	912918890				
MAT OTHER ALLO	61172917	61172917				
TRAV PER DIEM	2072047	2072047				
GROUP TOTAL	1760266425	1760266425				
						PALMDALE
DIR LABOR HRS	6638373	6638373				
DIR LABOR AMT	166633612	166633612				
OVERTIME	10083080	10083080				
OVERHEAD	198777778	198777778				
GROUP TOTAL	375494470	375494470				
						INSPECTI
DIR LABOR HRS	18174344	17286115	612414	50371	206921	17
DIR LABOR AMT	417382547	395232876	15060748	1238762	5374068	44
OVERTIME	11571854	11357438	174221	14330	23788	
OVERHEAD	458509642	432607776	17935892	1475243	5964193	49
TRAV PER DIEM	149572	124319	14958	10295		
GROUP TOTAL	887613615	839322409	33185819	2738630	11362049	93
						SHIPPING
DIR LABOR HRS	3735319	627462	2799656	230272	72006	5
DIR LABOR AMT	78480463	12616975	59184143	4867959	1673720	13
OVERTIME	671134	124205	503064	41378	2298	
OVERHEAD	108401048	16993816	82236215	6773257	2215585	18
MAT OTHER ALLO	58829608	3099147	49786105	4085899	1717214	14
SUBCONTRACT	45357008	1121527	9869484	811776	31004104	255

OF ACCUMULATED COSTS

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2	G.S.E. TF 102	M. T. U.	F-102	TF-102
	OTHER COSTS			
03	19493		31340980	1188469
96	278460	647386	529680510	44011575
99	297953	647386	561021490	45200044
	FORT WORTH COSTS			
22		416291	3573670108	1865705855
22		416291	3573670108	1865705855
	POMONA COSTS			
		62381	154058031	12670326
		62381	154058031	12670326
	PALMDALE			
			26942208	3588922
			647152278	92628348
			41656672	2665273
			802037940	110880950
			51754196	9418721
			1914573	157474
			1544515659	215750766
	PALMDALE INSPECTION			
			6134217	504156
			153978902	12654710
			9317229	765851
			183682460	15095318
			346978591	28515879
	INSPECTION			
	17020	1503	16233142	1052973
8	442021	34072	370640332	24592544
8	1958	119	10920878	436560
3	490563	35975	405427393	27180383
			114870	9449
9	934542	70166	787103473	52218936
	SHIPPING			
	5923		579575	47887
0	137666		11654343	962632
8	189		114765	9440
5	182175		15697294	1296522
4	141243		2863612	235535
4	2550117		1036292	85235

CONVAIR
SAN DIEGO TF-72-C-IV

STATEMENT OF ACCUM

DESCRIPTION	TOTAL CONTRACT COST	ACTUAL PROJECT COST	SPARES F 102	SPARES TF 102	G.S.E. F102	G.S.E. TF
GROUP TOTAL	291739261	33955670	201579011	16580269	36612921	3011
						PRODUCTIO
DIR LABOR HRS	360542	360542				
DIR LABOR AMT	16440926	16440926				
OVERTIME	299947	299947				
OVERHEAD	17656722	17656722				
MAT OTHER ALLO	259919	259919				
TRAV PER DIEM	3631460	3631460				
GAS N OIL	119855465	119855465				
GROUP TOTAL	158144439	158144439				
DEPT HOURS TOT	20186898 3	19077454 6	833336 9	68542 9	189645 9	155
DEPT COSTS TOT	409821900 25	309211881 53	64701121 11	7693655 58	25991526 29	21377
CONT HOURS TOT	23812074 6	22521108 9	886826 7	72942 7	292758 8	240
CONT COST TOT	436158091 22	333209156 14	65048177 12	7722021 54	27488411 55	22609
G. O. OVERHEAD						
SAN DIEGO	4568 864 51	4 286982 35	195885 19	15 983 93	62355 36	5 1
FORT WORTH	1238 498 49	1 180435 91	24235 04	33 759 13	17 34	
POMONA	46 534 97	40005 58	6023 73	495 46		
TOTAL INCLUDING G. O. OVERHEAD	442011 989 19	338 716579 98	65 274321 08	7772 260 06	27 550784 25	2 266 0

Labor Cut-off 29 October 1961

Accounting Department
Cost Accounting Section
Plant II, Ext. 564
S.D.R. 93-6-16

13 November 1961

Distribution

Evans, R. D.
Fettorly, R. E.
Richman, J. L.

ACCUMULATED COSTS

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G.S.E. TF 102	M. T. U.	F-102	TF-102
3011390		31366306	2589364
PRODUCTION FLIGHT			
		332394	28148
		15224819	1216107
		287282	12665
		16333687	1323035
		31240	228679
		3345550	285910
		106178211	13677254
		141400789	16743650
155990	23190	175432046	15342500
213778932	8592642	2703590211 0	388528604 3
240803	143572	206268705	18942384
226090006	42942481	2920628835 3	411462726 1
5 12851	2 52917	3 903430 44	383551 91
	5107	775366 37	405069 54
	1020	36965 19	3040 39
2 266 02857	432 01525	296 778645 53	41 937934 45

STATEMENT OF ACC

DESCRIPTION	TOTAL CONTRACT COST	ACTUAL PROJECT COST	SPARES F 102	SPARES TF 102	G.S.E. F102	G.S.E.
						ENGINE
						DESIGN
DIR LABOR HRS	12577092	11399553	1120	92	975818	
DIR LABOR AMT	384046310	351444009	29892	2459	26711094	
OVERTIME	16179635	14928408			1018365	
OVERHEAD	342045401	309254787	35587	2927	27177199	
MAT OTHER ALLO	174018094	147385852	5465868	438700	18183255	
SUBCONTRACT	151736681	55505980			64875560	
TRAV PER DIEM	21194987	19822723			1153073	
GROUP TOTAL	1089221108	898341759	5531347	444086	139118546	
						EXPERI
DIR LABOR HRS	629434	629434				
DIR LABOR AMT	15259451	15259451				
OVERTIME	573975	573975				
OVERHEAD	16199840	16199840				
MAT OTHER ALLO	8085085	8085085				
SUBCONTRACT	1187679	1187679				
TRAV PER DIEM	97995	97995				
GROUP TOTAL	41404025	41404025				
						WIND T
DIR LABOR HRS	13744	13744				
DIR LABOR AMT	412040	412040				
OVERTIME	12625	12625				
OCCUPANCY HRS	185	185				
OVERHEAD	176545	176545				
MAT OTHER ALLO	7781	7781				
TRAV PER DIEM	2478	2478				
GROUP TOTAL	611469	611469				
						EDWARD
DIR LABOR HRS	180839	180839				
DIR LABOR AMT	5066098	5066098				
OVERTIME	106094	106094				
OVERHEAD	6218785	6218785				
GROUP TOTAL	11390977	11390977				
						HOLLOM
DIR LABOR HRS	148691	148691				
DIR LABOR AMT	4040850	4040850				
OVERTIME	153721	153721				
OVERHEAD	5538432	5538432				
MAT OTHER ALLO	264695	264695				
TRAV PER DIEM	2162650	2162650				

OF ACCUMULATED COSTS

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102	G.S.E. TF 102	M. T. U.	F-102	TF-102
	ENGINEERING			
	DESIGN AND LIAISON			
18	80262	120247	10148461	1251092
094	2197018	3661838	313084336	38359673
365	83761	149101	13248047	1680361
199	2235353	3339548	275565472	33689315
255	1494623	1049796	135649771	11736081
560	5336083	26019058	51287527	4218453
073	94842	124349	17896480	1926243
546	11441680	34343690	806731633	91610126
	EXPERIMENTAL FACTORY			
			584289	45145
			14169616	1089835
			532684	41291
			15052809	1147031
			7470619	614466
			1097415	90264
			90547	7448
			38413690	2990335
	WIND TUNNEL			
			13181	563
			395995	16045
			11976	649
			185	
			176299	246
			7189	592
			2290	188
			593749	17720
	EDWARDS			
			176537	4302
			4948699	117399
			105253	841
			6077747	141038
			11131699	259278
	HOLLOMAN			
			145450	3241
			3951947	88903
			153619	102
			5421932	116500
			247188	17507
			2162650	

CONVAIR
SAN DIEGO TF-72-C-IV

STATEMENT OF ACC

DESCRIPTION	TOTAL CONTRACT COST	ACTUAL PROJECT COST	SPARES F 102	FPARES TF102	G.S.E. F102	G.S.E.
GROUP TOTAL	12160348	12160348				
DEPT HOURS TOT	13549985	12372446	1120	92	975818	
DEPT COSTS TOT	1154787927	963908578	5531347	444086	139118546	11
						CUSTOM
						SERVIC
DIR LABOR HRS	260584	260584				
DIR LABOR AMT	8374044	8374044				
OVERTIME	21130	21130				
OVERHEAD	8707489	8707489				
GROUP TOTAL	17102663	17102663				
						SERVIC
DIR LABOR HRS	2142635	1800633	275167	22633	40843	
DIR LABOR AMT	52584062	44817552	6259600	514859	916656	
OVERTIME	2889959	2601074	223133	18353	43797	
OVERHEAD	50622227	48094260	2032978	167213	302866	
MAT OTHER ALLO	15895502	13551700	2163746	177973	1923	
SUBCONTRACT	2726918		2517671	207081	2001	
TRAV PER DIEM	469878	386890	82988			
GROUP TOTAL	125188546	109451476	13280116	1085479	1267243	
						FIELD
DIR LABOR HRS	1089110	1089110				
DIR LABOR AMT	36275429	36275429				
OVERTIME	313590	313590				
OVERHEAD	8904722	8904722				
MAT OTHER ALLO	1572435	1572435				
TRAV PER DIEM	32728655	32728655				
GROUP TOTAL	79794831	79794831				
DEPT HOURS TOT	3492329	3150327	275167	22633	40843	
DEPT COSTS TOT	222086040	206348970	13280116	1085479	1267243	
						TOOLIN
						TOOL E
DIR LABOR HRS	5924775	5747448	156291	12854	7559	
DIR LABOR AMT	154182364	148535067	4960409	408000	257699	
OVERTIME	5188780	5161181	25501	2098		
OVERHEAD	112630087	108556966	3546117	291672	217441	
GROUP TOTAL	272001231	262253214	8532027	701770	475140	
						TOOL M
DIR LABOR HRS	10681949	10563597	102320	8419	6909	

OF ACCUMULATED COSTS

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02	G.S.E. TF102	M.T.U.	F-102	TF-102
			11937336	223012
18	80262	120247	11068103	1304343
546	11441680	34343690	868808107	95100471
	CUSTOMER SERVICE			
	SERVICE ENGINEERING			
			240780	19804
			7737617	636427
			19524	1606
			8045720	661769
			15802861	1299802
	SERVICE PUBLICATION			
43	3359		1674065	126568
656	75395		41623096	3194456
797	3602		2417449	183625
866	24910		44686911	3407349
923	160		12521768	1029932
001	165			
			357605	29285
243	104232		101606829	7844647
	FIELD SERVICE			
			1006337	82773
			33389841	2885588
			290085	23505
			8112963	791759
			1452930	119505
			30241280	2487375
			73487099	6307732
43	3359		2921182	229145
243	104232		190896789	15452181
	TOOLING			
	TOOL ENGINEERING			
59	623		5214111	533337
699	21189		134255372	14279695
			4789192	371989
441	17891		98352083	10204883
140	39080		237396647	24856567
	TOOL MANUFACTURING			
09	569	135	9232155	1331442

CONVAIR
SAN DIEGO TF-72-C-IV

STATEMENT OF A

DESCRIPTION	TOTAL CONTRACT COST	ACTUAL PROJECT COST	SPARES F 102	SPARES TF 102	G.S.E. F 102	G.S
DIR LABOR AMT	247439408	244280102	2725476	224173	190919	
OVERTIME	12877782	12864388	12376	1018		
OVERHEAD	257134893	253608902	3037895	249870	217243	
SUBCONTRACT	52899408	52810254	80019	6301	2619	
TRAV PER DIEM	205392	205392				
MAT N PURC PTS	30417846	29133049	758739	54341	435814	
OTHER COSTS	82417548	72960824	747606	69558	7983003	
GROUP TOTAL	683392277	665862911	7362111	605261	8829598	
						MFG
DIR LABOR HRS	2602405	2602405				
DIR LABOR AMT	61793227	61793227				
OVERTIME	1444979	1444979				
OVERHEAD	65349083	65349083				
MAT OTHER ALLO	77206216	77206216				
SUBCONTRACT	4782280	4782280				
TRAV PER DIEM	63134	63134				
PROD TEST EQUP	16893245	16893245				
SOUND SUPRESS	73802139	73802139				
GROUP TOTAL	301334303	301334303				
DEPT HOURS TOT	19209129	18913450	258611	21273	14468	
DEPT COSTS TOT	1256727811	1229450428	15894138	1307031	9304738	
						MAN
						FAC
DIR LABOR HRS	141997334	134899190	4921108	404770	1617532	
DIR LABOR AMT	2918744401	2749202073	111724421	9189443	44512425	
OVERTIME	102412199	100319618	1611298	132533	309980	
OVERHEAD	3532264853	3322639643	141476150	11627332	51749483	
SPARES OVHD	52991497		43086109	3543879	5878036	
ALLOCATED HRS	431745	431734	10	1		
GROUP TOTAL	6606412950	6172161334	297897978	24493187	102449924	
						MAT
SUBCONTRACT	9148529008	6712987163	503861019	41443116	1744782758	
MAT N PURC PTS	13145372103	6749516871	5205079915	428120712	700564516	
EXCESS USAGE	106113054	106113054				
SURPLUS N OBSO	1164860000	1164860000				
REWORK	160317505	148822802	10621109	873594		
PROGRAM COSTS	389587431	389587431				
CANCELLATION	108029918	99836684	254186	7897581	38315	
GROUP TOTAL	24222809019	15371724005	5719816229	478335003	2445385589	
						OTH
TRAV PER DIEM	32895022	32529449	100788	8289	237003	
OTHER COSTS	632750798	608178873	18718196	1539587	3388296	
GROUP TOTAL	665645820	640708322	18818984	1547876	3625299	

OF ACCUMULATED COSTS

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02	G.S.E. TF 102	M.T.U.	F-102	TF-102
919	15704	3034	214185115	30094987
			11543340	1321048
243	17868	3115	222090056	31518846
619	215		52810254	
			190394	14998
814	35903		26739206	2393843
003	656557		67440524	5520300
598	726247	6149	594998889	70864022
	MFG AIDS N TOOL HANDLING			
			2400812	201593
			56991942	4801285
			1336354	108625
			60227219	5121864
			71432595	5773621
			4418826	363454
			58336	4798
			15609358	1283887
			68193176	5608963
			278267806	23066497
68	1192	135	16847078	2066372
738	765327	6149	1110663342	118787086
	MANUFACTURING			
	FACTORY			
32	133047	21687	124811508	10087682
425	3661196	454843	2534568560	214633513
980	25497	13273	98099976	2219642
483	4256514	515731	3063259228	259380415
036	483473			
			398922	32812
924	8426680	983847	5695927764	476233570
	MATERIAL AND SUBCONTRACT			
758	143510274	1944678	6202837392	510149771
516	57622196	4467893	6235061462	514455409
			98048463	8064591
			1076330638	88529362
			137403024	11419778
			359978785	29608646
315	3152		92234232	7602452
589	201135622	6412571	14201893996	1169830009
	OTHER COSTS			
003	19493		31340980	1188469
296	278460	647386	561546303	46632570
299	297953	647386	592887283	47821039

STATEMENT OF ACC

DESCRIPTION	TOTAL CONTRACT COST	ACTUAL PROJECT COST	SPARES F 102	SPARES TF 102	G.S.E. F 102	G.S.E
						FORT
SUBCONTRACT	5892547146	5470166612	178048559	243867462	48222	
GROUP TOTAL	5892547146	5470166612	178048559	243867462	48222	
						POMON
SUBCONTRACT	188448657	166728357	20014025	1643894		
GROUP TOTAL	188448657	166728357	20014025	1643894		
						PALMD
DIR LABOR HRS	30531130	30531130				
DIR LABOR AMT	739780626	739780626				
OVERTIME	44321945	44321945				
OVERHEAD	912918890	912918890				
MAT OTHER ALLO	61187065	61187065				
TRAV PER DIEM	2072047	2072047				
GROUP TOTAL	1760280573	1760280573				
						PALMD
DIR LABOR HRS	6638373	6638373				
DIR LABOR AMT	166633612	166633612				
OVERTIME	10083080	10083080				
OVERHEAD	198777778	198777778				
GROUP TOTAL	375494470	375494470				
						INSPE
DIR LABOR HRS	18173973	17285755	612404	50370	206921	
DIR LABOR AMT	417370885	395221526	15060460	1238738	5374068	
OVERTIME	11571834	11357438	174203	14328	23788	
OVERHEAD	458497985	432596465	17935572	1475217	5964193	
TRAV PER DIEM	149572	124319	14958	10295		
GROUP TOTAL	887590276	839299748	33185193	2738578	11362049	
						SHIPP
DIR LABOR HRS	3734474	626617	2799656	230272	72006	
DIR LABOR AMT	78459984	12596496	59184143	4867959	1673720	
OVERTIME	671134	124205	503064	41378	2298	
OVERHEAD	108374498	16967266	82236215	6773257	2215585	
MAT OTHER ALLO	58770367	3090610	49748287	4082789	1708181	
SUBCONTRACT	45357008	1121527	9869484	811776	31004104	
GROUP TOTAL	291632991	33900104	201541193	16577159	36603888	
						PRODU
DIR LABOR HRS	360542	360542				
DIR LABOR AMT	16440926	16440926				
OVERTIME	299947	299947				
OVERHEAD	17656722	17656722				

OF ACCUMULATED COSTS Page 4 of 5

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02	G.S.E. TF 102	M.T.U.	F-102	TF-102
	FORT WORTH COSTS			
222		416291	35938995 64	18762670 48
222		416291	35938995 64	18762670 48
	POMONA COSTS			
		62381	1540580 31	126703 26
		62381	1540580 31	126703 26
	PALMDALE			
			269422 08	35889 22
			6471522 78	926283 48
			416566 72	26652 73
			8020379 40	1108809 50
			517672 69	94197 96
			19145 73	1574 74
			15445287 32	2157518 41
	PALMDALE INSPECTION			
			61342 17	5041 56
			1539789 02	126547 10
			93172 29	7658 51
			1836824 60	150953 18
			3469785 91	285158 79
	INSPECTION			
21	170 20	15 03	162328 04	10529 51
068	4420 21	340 72	3706297 15	245918 11
788	19 58	1 19	109208 44	4365 94
193	4905 63	359 75	4054167 89	271796 76
			1148 70	94 49
049	9345 42	701 66	7870822 18	522175 30
	SHIPPING			
06	59 23		5787 95	478 22
720	1376 66		116354 20	9610 76
298	1 89		1147 65	94 40
585	1821 75		156727 62	12945 04
181	1405 00		28557 23	2348 87
104	25501 17		10362 92	852 35
888	30106 47		313149 62	25851 42
	PRODUCTION FLIGHT			
			3323 94	281 48
			152248 19	12161 07
			2872 82	126 65
			163336 87	13230 35

CONVAIR
SAN DIEGO TF-72-C-IV

STATEMENT OF AC

DESCRIPTION	TOTAL CONTRACT COST	ACTUAL PROJECT COST	SPARES F 102	SPARES TF 102	G.S.E. F 102	G.S.
MAT OTHER ALLO	259919	259919				
TRAV PER DIEM	3631460	3631460				
GAS N OIL	119855465	119855465				
GROUP TOTAL	158144439	158144439				
DEPT HOURS TOT	201867571	190773341	8333178	685413	1896459	
DEPT COSTS TOT	4104900634 1	3098860796 4	646932216 1	76920315 9	259947497 1	2
CONT HOURS TOT	238119014	225209564	8868076	729411	2927588	
CONT COST TOT	4368260811 9	3338831594 0	650402776 2	77203975 5	274916549 8	22
G. O. OVERHEAD						
SAN DIEGO	4 568824 33	4286 94697	195880 76	15983 56	62 35536	
FORT WORTH	1 238496 42	1180 43384	24235 04	33759 13	1734	
POMONA	46534 97	40 00558	6023 73	495 46		
TOTAL INCLUDING G. O. OVERHEAD	442 679936 91	339390 54579	65 266417 15	7 770635 70	27554 02768	2 2

Labor Cut-off 1 January 1961

Accounting Department
Cost Accounting Section
Plant II, Ext. 564
S.D.R. 93-6-16

31 January 1961

Distribution

Benner, P. M.
Blethen, L. E.
Bolick, R. L.
Breen, I. J.
Fetterly, R. E.
Hamm, P. A.

Harper, O. W. (3)
Jodka, J. J.
Parry, W. H.
Snyder, J. F.
Sponagle, J. M.
Whittier, W. W.

OF ACCUMULATED COSTS

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102	G.S.E. TF 102	M.T.U.	F-102	TF-102
			31240	228679
			3345550	285910
			106178211	13677254
			141400789	16743650
59	155990	23190	175430848	15342493
971	213805444	8592642	27089971930	3898636034
88	240803	143572	206267211	18942353
498	226116683	42942481	29260340168	4127975772
536	5128 51	2 52917	3 903395 78	383 55119
734		5107	775364 97	405 06887
		1020	36965 19	3 04039
768	2 266295 34	432 01525	297 319127 62	42 071 41817

CONVAIR
SAN DIEGO TF-72-A-1

STATEMENT OF ACCUM

DESCRIPTION	TOTAL CONTRACT COST	ACTUAL PROJECT COST	COLUMN 0 SPARES F102A	COLUMN 1 SPARES TF-102A	COLUMN 2 G.S.E. F102A	COLUMN G.S.E. TF
						ENGINEER
						DESIGN AN
DIR LABOR HRS	12577433	11400796	287	23	975818	80
DIR LABOR AMT	383935929	351357819	7540	620	26711094	219
OVERTIME	16219635	14968408			1018365	8
OVERHEAD	341430313	308669158	8367	688	27177199	223
MAT OTHER ALLO	165733148	148279233	132199		15036150	123
SUBCONTRACT	150256499	55981949			63068076	518
TRAV PER DIEM	21081172	19708908			1153073	9
GROUP TOTAL	1078656696	898965475	148106	1308	134163957	1103
						EXPERIMEN
DIR LABOR HRS	629434	629434				
DIR LABOR AMT	15259451	15259451				
OVERTIME	569503	569503				
OVERHEAD	16100181	16100181				
MAT OTHER ALLO	8085085	8085085				
SUBCONTRACT	1187679	1187679				
TRAV PER DIEM	97995	97995				
GROUP TOTAL	41299894	41299894				
						WIND TUN
DIR LABOR HRS	13544	13544				
DIR LABOR AMT	401174	401174				
OVERTIME	12500	12500				
OCCUPANCY HRS	185	185				
OVERHEAD	174797	174797				
MAT OTHER ALLO	10259	10259				
GROUP TOTAL	598730	598730				
						EDWARDS
DIR LABOR HRS	180839	180839				
DIR LABOR AMT	5066098	5066098				
OVERTIME	106094	106094				
OVERHEAD	6216003	6216003				
GROUP TOTAL	11388195	11388195				
						HOLLOMAN
DIR LABOR HRS	148691	148691				
DIR LABOR AMT	4040850	4040850				
OVERTIME	153721	153721				
OVERHEAD	5538432	5538432				
MAT OTHER ALLO	264695	264695				
TRAV PER DIEM	2162650	2162650				
GROUP TOTAL	12160348	12160348				
DEPT HOURS TOT	13550126	12373489	287	23	975818	80
DEPT COSTS TOT	1144103863	964412642	148106	1308	134163957	1103

CUSTOMER

F ACCUMULATED COSTS Page 1 of 5

DATE DEC 59

CONTRACT AF-31174

COLUMN 3 G.S.E. TF102A	COLUMN 4 M.T.U.	COLUMN 5 F-102 A	COLUMN 6 TF-102 A	COLUMN 7	COLUMN 8	COLUMN 9
ENGINEERING						
DESIGN AND LIAISON						
80262	120247	10149608	1251188			
2197018	3661838	313004697	38353122			
83761	149101	13285005	1683403			
2235353	3339548	275024347	33644811			
1235770	1049796	136475255	11803978			
5187416	26019058	51727322	4254627			
94842	124349	17791315	1917593			
11034160	34343690	807307941	91657534			
EXPERIMENTAL FACTORY						
		584289	45145			
		14169616	1089835			
		528552	40951			
		14960724	1139457			
		7470619	614466			
		1097415	90264			
		90547	7448			
		38317473	2982421			
WIND TUNNEL						
		12996	548			
		385955	15219			
		11860	640			
		185				
		174682	115			
		9479	780			
		581976	16754			
EDWARDS						
		176537	4302			
		4948699	117399			
		105253	841			
		6075176	140827			
		11129128	259067			
HOLLOMAN						
		145450	3241			
		3951947	88903			
		153619	102			
		5421932	116500			
		247188	17507			
		2162650				
		11937336	223012			
80262	120247	11069065	1304424			
11034160	34343690	869273854	95138788			

CUSTOMER SERVICE

CONVAIR
SAN DIEGO TF-72-A-1

ˆTATEMENT OF ACCU

DESCRIPTION	TOTAL CONTRACT COST	ACTUAL PROJECT COST	COLUMN 0 SPARES F102A	COLUMN 1 SPARES TF*102A	COLUMN 2 G.S.E. F102A	COLUMN G.S.E. TF
						SERVICE
DIR LABOR HRS	260584	260584				
DIR LABOR AMT	8374044	8374044				
OVERTIME	21130	21130				
OVERHEAD	8707489	8707489				
GROUP TOTAL	17102663	17102663				
						SERVICE
DIR LABOR HRS	2142635	1800633	275167	22633	40843	3
DIR LABOR AMT	52534062	44817552	6259600	514859	916656	7
OVERTIME	2889959	2601074	223133	18353	43797	
OVERHEAD	50622003	48094036	2032978	167213	302866	2
MAT OTHER ALLO	15893703	13551700	2162084	177836	1923	
SUBCONTRACT	2417032		2233338	183694		
TRAV PER DIEM	469878	386890	82988			
GROUP TOTAL	124876637	109451252	12994121	1061955	1265242	10
						FIELD SE
DIR LABOR HRS	1086197	1086197				
DIR LABOR AMT	36271786	36271786				
OVERTIME	257849	257849				
OVERHEAD	9006052	9006052				
MAT OTHER ALLO	1360354	1360354				
TRAV PER DIEM	32668614	32668614				
GROUP TOTAL	79564655	79564655				
DEPT HOURS TOT	3489416	3147414	275167	22633	40843	3
DEPT COSTS TOT	221543955	206118570	12994121	1061955	1265242	10
						TOOLING
						TOOL ENG
DIR LABOR HRS	5863180	5694819	153611	12634	1955	
DIR LABOR AMT	152542594	147219591	4870675	400619	47780	
OVERTIME	5188780	5161181	25501	2098		
OVERHEAD	110598429	106818137	3458604	284474	34386	
GROUP TOTAL	268329803	259198909	8354780	687191	82166	
						TOOL MAN
DIR LABOR HRS	10670725	10562757	95324	7844	4311	
DIR LABOR AMT	247127219	244276221	2519647	207243	111872	
OVERTIME	12871946	12858906	12049	991		
OVERHEAD	253621381	250434524	2809421	231080	132355	1
SUBCONTRACT	52899408	52810254	80019	6301	2619	
TRAV PER DIEM	205392	205392				
MAT N PURC PTS	30388697	29113009	704047	57908	474688	3
OTHER COSTS	82407652	72959658	747606	61491	7982340	65
GROUP TOTAL	679521695	662657964	6872789	565014	8703874	71
						MFG AIDS

F ACCUMULATED COST

DATE D' CONTRACT AF-31174

	COLUMN 3 G.S.E. TF102A	COLUMN 4 M.T.U.	COLUMN 5 F-102A	COLUMN 6 TF-102A	COLUMN 7	COLUMN 8	COLUMN 9
	SERVICE ENGINEERING						
			240780	19804			
			7737617	636427			
			19524	1606			
			8045720	661769			
			15802861	1299802			
	SERVICE PUBLICATION						
3	3359		1674065	126568			
56	75395		41623096	3194456			
97	3602		2417449	183625			
66	24910		44686704	3407332			
23	160		12521768	1029932			
			357605	29285			
42	104067		101606622	7844630			
	FIELD SERVICE						
			1003645	82552			
			33386475	2885311			
			238580	19269			
			8206592	799460			
			1256967	103387			
			30185802	2482812			
			73274416	6290239			
3	3359		2918490	228924			
42	104067		190683899	15434671			
	TOOLING						
	TOOL ENGINEERING						
5	161		5165529	529290			
80	3929		133041118	14178473			
			4789192	371989			
86	2828		96746437	10071700			
66	6757		234576747	24622162			
	TOOL MANUFACTURING						
1	354	135	9231378	1331379			
72	9202	3034	214181528	30094693			
			11538275	1320631			
55	10886	3115	219193545	31240979			
19	215		52810254				
			190394	14998			
88	39045		26719166	2393843			
40	656557		67439446	5520212			
74	715905	6149	592072608	70585356			
	MFG AIDS N TOOL HANDLING						

CONVAIR
SAN DIEGO TF-72-A-1

⁻TATEMENT OF ACC

▼ DESCRIPTION	TOTAL CONTRACT COST	ACTUAL PROJECT COST	COLUMN 0 SPARES F102A	COLUMN 1 SPARES TF-102A	COLUMN 2 G.S.E. F-102A	COLU G.S.
DIR LABOR HRS	2679714	2679714				
DIR LABOR AMT	63822106	63822106				
OVERTIME	144979	144979				
OVERHEAD	70435746	70435746				
MAT OTHER ALLO	77365493	77365493				
SUBCONTRACT	4956480	4956480				
PROD TEST EQUP	16893325	16893325				
SOUND SUPRESS	72776022	72776022				
GROUP TOTAL	307694151	307694151				
DEPT HOURS TOT	19213619	18937290	248935	20478	6266	
DEPT COSTS TOT	1255545649	1229551024	15227569	1252205	8786040	
						MANUFA
						FACTOR
DIR LABOR HRS	141983483	134897823	4909750	403834	1617356	1
DIR LABOR AMT	2918373093	2749150104	111434063	9165561	44507713	3
OVERTIME	102429245	100340728	1609482	132384	308041	
OVERHEAD	3532655293	3323427805	141105144	11606061	51744508	4
SPARES OVHD	50654722		41905995	3446814	4898969	
GROUP TOTAL	6604112353	6172918637	296054634	24350820	101459231	8
						MATERI
SUBCONTRACT	9139082015	6714264717	503695756	41429522	1735038533	142
MAT N PURC PTS	13110942384	6749802616	5176680444	425784825	696886899	57
EXCESS USAGE	106118305	106118305				
SURPLUS N OBSO	1166842126	1166842126				
REWORK	160212112	148754058	10587245	870809		
PROGRAM COSTS	386128134	386128134				
CANCELLATION	120177127	111744497	254186	7897581	259517	
GROUP TOTAL	24189502203	15383654453	5691217641	475982737	2432184949	200
						OTHER
TRAV PER DIEM	32493362	32127789	100738	8289	237003	
OTHER COSTS	739200407	694225956	39373422	1283982	3390981	
GROUP TOTAL	771693769	726353745	39474210	1292271	3627984	
						FORT W
SUBCONTRACT	5902475905	5482496260	177038989	2424761143	48222	
GROUP TOTAL	5902475905	5482496260	177038989	2424761143	48222	
						POMONA
SUBCONTRACT	188440655	166720355	20014025	1643894		
GROUP TOTAL	188440655	166720355	20014025	1643894		
						PALMDA
DIR LABOR HRS	30529257	30529257				
DIR LABOR AMT	739789086	739789086				
OVERTIME	44321496	44321496				

OF ACCUMULATED COST Page 3 of 5 DATE DF 9 CONTRACT AF-31174

102A	COLUMN 3 G.S.E.F-102A	COLUMN 4 M.T.U.	COLUMN 5 F-102A	COLUMN 6 TF-102A	COLUMN 7	COLUMN 8	COLUMN 9
			2478065	201649			
			59020872	4801234			
			1336354	108625			
			65069203	5366543			
			71579767	5785726			
			4579787	376693			
			15609432	1283893			
			67245044	5530978			
			284440459	23253692			
6	515	135	16874972	2062318			
40	722662	6149	1111089814	118461210			
	MANUFACTURING						
	FACTORY						
6	133033	21687	124810243	10087580			
13	3660809	454843	2534520500	214629604			
41	25337	13273	98119482	2221246			
08	4256044	515731	3063987490	259440315			
69	402944						
31	8345134	983847	5696627472	476291165			
	MATERIAL AND SUBCONTRACT						
33	142708799	1944678	6204017853	510246864			
99	57319707	4467893	6235325563	514477053			
			98053315	8064990			
			1078162120	88680006			
			137339503	11414555			
			356782395	29345739			
17	21346		103237051	8507446			
49	200049852	6412571	14212917800	1170736653			
	OTHER COSTS						
03	19493		30969846	1157943			
81	278680	647386	641053807	53172149			
84	298173	647386	672023653	54330092			
	FORT WORTH COSTS						
22		416291	3602000143	1880496117			
22		416291	3602000143	1880496117			
	POMONA COSTS						
		62381	154050637	12669718			
		62381	154050637	12669718			
	PALMDALE						
			26940480	3588777			
			647160136	92628950			
			41656257	2665239			

CONVAIR
SAN DIEGO TF-72-A-1

STATEMENT OF ACC

DESCRIPTION	TOTAL CONTRACT COST	ACTUAL PROJECT COST	COLUMN 0 SPARES F102A	COLUMN 1 SPARES TF-102A	COLUMN 2 G.S.E. F102A	COLUM G.S.E.
OVERHEAD	912773575	912773575				
MAT OTHER ALLO	61086433	61086433				
TRAV PER DIEM	2072047	2072047				
~~GROUP TOTAL~~	1760042637	1760042637				
						PALMDAL
DIR LABOR HRS	6638373	6638373				
DIR LABOR AMT	166633612	166633612				
OVERTIME	10083080	10083080				
OVERHEAD	198777778	198777778				
GROUP TOTAL	375494470	375494470				
						INSPEC
~~DIR LABOR HRS~~	18163196	17285267	603206	49615	206612	
DIR LABOR AMT	417084565	395208521	14816420	1218667	5365563	4
OVERTIME	11571609	11357442	173992	14312	23786	
~~OVERHEAD~~	458236471	432670983	17635217	1450513	5954057	4
TRAV PER DIEM	124408	124319	82	7		
GROUP TOTAL	887017053	839361265	32625711	2683499	11343406	9
						SHIPPI
DIR LABOR HRS	3652551	618892	2731576	224674	71526	
DIR LABOR AMT	76538289	12413659	57538622	4736727	1662535	
OVERTIME	671134	124205	503064	41378	2298	
OVERHEAD	105688944	16714972	80012814	6581141	2199131	
MAT OTHER ALLO	57446228	3089755	48518331	3990688	1707048	
SUBCONTRACT	45085386	1057389	9869484	811776	30812388	2
GROUP TOTAL	285429981	33399980	196492315	16161710	36383400	2
						PRODUC
DIR LABOR HRS	360542	360542				
DIR LABOR AMT	16440926	16440926				
OVERTIME	301856	301856				
OVERHEAD	17656722	17656722				
MAT OTHER ALLO	288453	288453				
TRAV PER DIEM	3602926	3602926				
GAS N OIL	119868151	119868151				
GROUP TOTAL	158159034	158159034				
DEPT HOURS TOT	201327402	190330154	8244532	678123	1895494	1
DEPT COSTS TOT	41122368060	31098600836	6452917575	764591074	2585047192	212
CONT HOURS TOT	237580563	224788347	8768921	721257	2918421	2
CONT COST TOT	43743561527	33498683072	6481287371	766906542	2729262431	224
G.O. OVERHEAD						
SAN DIEGO	4556 95152	4 278122 24	193 30273	15 77156	62 11702	5
FORT WORTH	1241 51339	1 183453 01	24 23414	33 75783	1734	
POMONA	46 52945	40005 58	6 01863	49504		
TOTAL INCLUDING G.O. OVERHEAD	443280 60963	340 488411 55	65036 42921	7719 08985	27354 75867	2249

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ACCUMULATED COST Page 4 of 5

DATE D') CONTRACT AF-31174

	COLUMN 3 G.S.E. TF102A	COLUMN 4 M.T.U.	COLUMN 5 F-102A	COLUMN 6 TF-102A	COLUMN 7	COLUMN 8	COLUMN 9
			80190369	110869906			
			51767269	9319164			
			1914573	157474			
			1544401904	215640733			
	PALMDALE INSPECTION						
			6134217	504156			
			153978902	12654710			
			9317229	765851			
			183682460	15095318			
			346978591	28515879			
	INSPECTION						
	16993	1503	16232353	1052914			
	441322	34072	370617698	24590823			
	1958	119	10920848	436594			
	489726	35975	405485643	27185340			
			114870	9449			
	933006	70166	787139059	52222206			
	SHIPPING						
	5883		571657	47235			
	136746		11466479	947180			
	189		114765	9440			
	180886		15439643	1275329			
	140406		2854933	234822			
	2534349		977028	80361			
	2992576		30852848	2547132			
	PRODUCTION FLIGHT						
			332394	28148			
			15224819	1216107			
			289046	12810			
			16333687	1323035			
			57605	230848			
			3319185	283741			
			106189933	13678218			
			141414275	16744759			
	155909	23190	175021344	15308810			
2	212618741	8592642	27188406382	3910194454			
	240045	143572	2058838711	189044476			
1	224479630	42942481	29359453949	4139229123			
2	5 10880	2 22529 17	3895 32826	382 793 98			
4		51 07	777 34861	406 104 40			
		10 20	36 96519	3 040 39			
7	2249 90510	432 015 25	298304 18155	42184 230 00			

CONVAIR
SAN DIEGO TF-72-A-1

STATEMENT OF AC

DESCRIPTION	TOTAL CONTRACT COST	ACTUAL PROJECT COST	COLUMN 0	COLUMN 1	COLUMN 2	CO

Labor Cut-off 31 December 1959

Cost Accounting Department
Cost Analysis Section
Plant II, Ext. 564
S.D.R. 93-6-16
41 February 1960

Distribution

Alkazin, J. J.
Blethen, L. E.
Bolick, R. L.
Fetterly, R. E.
Hamm, P. A.
Harper, O. W. (3)
Herbig, J. R.
Jodka, J. J.

Johnson, E. E.
Parry, W. H.
Snyder, J. F.
Sponagle, J. M.
Thetford, J. W.
Wallman, G.
Whittier, W. W.

STATEMENT OF ACC
CONTRACT AF 33
31 Decem

Flight

	TOTAL CONTRACT COSTS F-102A	TOTAL CONTRACT COSTS TF-102A	SPARES F-102A	SPARES TF-102A
PRODUCTION FLIGHT				
Direct Labor Hours	32 901 2	2 787 0		
Direct Labor Costs	149 957 54	11 972 65		
Overtime Premium	2 849 62	124 74		
Overhead	162 162 56	13 133 76		
Gas & Oil Costs	1 065 389 40	133 126 00		
Material & Other Costs	254 12	2 282 01		
Travel & Per Diem	31 126 05	2 610 48		
Total	1 411 739 29	163 949 64		
3 TOTAL MANUFACTURING COSTS	350 137 481 70	47 492 750 03	54 613 138 56	6 565 844 9
TOTAL MANUFACTURING HOURS	18 420 882 4	1 588 101 3	736 978 6	60 617 2
DIVISION COSTS	373 240 039 33	49 865 378 76	54 805 839 85	6 581 541 2
San Diego G. O. Overhead	4 125 347 14	395 583 24	171 311 40	13 962
Fort Worth G. O. Overhead	799 997 39	435 910 58	93 494 61	30 563
Pomona G. O. Overhead	42 810 91	3 520 39	5 847 45	480
TOTAL CONTRACT COSTS	378 208 194 77	50 700 392 97	55 006 423 31	6 626 548
TOTAL CONTRACT HOURS	21 644 523 8	1 956 800 1	776 931 5	63 903

LABOR CUT OFF

Cost Accounting Dept.
Works Accounting Section
Plant 11, Ext. 564
S. D. R. 93-6- 16
4 February 1959

Distribution

XXXXXXXXXXX
Bolick, R. L.
Brymer, A. O.
Hehn, J. B.
Herbig, J. R.
XXXXXXXXXXXXX
Sponagle, J. M.
Johnson, D. L.

Jodka, J. J
Johnson, E.
XXXXXXXXX
Mc Laughlin
Mc Manus, R
Moseley, M.
O'Hollaren,
Parker, W.

F ACCUMULATED COSTS
AF 33(600)-31174
December 1958

2A	GROUND SUPPORT F-102A	GROUND EQUIPMENT TF-102A	M. T. U. F-102A	ACTUAL PROJECT COSTS	562 F-102A	63 TF-102A
				35 688 2	32 901 2	2 787 0
				161 930 19	149 957 54	11 972 65
				2 974 36	2 849 62	124 74
				175 296 32	162 162 56	13 133 76
				1 198 515 40	1 065 389 40	133 126 00
				2 536 13	254 12	2 282 01
				33 736 53	31 126 05	2 610 48
				1 574 988 93	1 411 739 29	163 249 64
91	25 036 204 33	2 059 215 19	85 835 72	309 269 993 02	270 402 303 09	38 867 689 93
2	183 027 7	15 054 2	2 303 0	19 011 003 0	17 498 573 1	1 512 429 9
22	26 080 169 33	2 145 200 28	417 649 23	333 075 018 18	291 936 380 92	41 138 637 26
65	60 549 45	4 979 81	2 162 01	4 267 965 06	3 891 324 28	376 640 78
41	17 34		51 07	1 181 851 54	776 504 37	405 347 17
98			10 20	39 992 67	36 953 26	3 039 41
20	26 140 736 12	2 150 180 09	419 872 51	338 564 827 45	296 641 162 83	41 923 664 62
4	284 716 8	23 418 2	12 688 3	22 439 665 7	20 570 187 2	1 869 478 5

J. J.
on, E. E.
~~XXXXXXX~~
ughlin, F. H.
nus, R. H.
ey, M. F.
laren, C. E.
r, W. T.

280-14

STATEMENT OF AC
CONTRACT AF 33
31 Decemb

	TOTAL CONTRACT COSTS F-102A	TOTAL CONTRACT COSTS TF-102A	SPARES F-102A	SPARES TF-102A
PALMDALE INSPECTION				
Direct Labor Hours	608,038.8	49,972.8		
Direct Labor Costs	1,524,509.80	125,290.36		
Overtime Premium	92,958.70	7,640.94		
Overhead	1,818,132.88	149,415.76		
Travel & Per Diem				
Total	3,435,601.38	282,347.06		
SAN DIEGO INSPECTION				
Direct Labor Hours	1,688,669.6	110,703.0	50,563.8	4,159
Direct Labor Costs	3,868,307.16	259,317.22	123,436.62	10,152
Overtime Premium	110,990.97	4,512.43	1,554.93	127
Overhead	4,245,247.76	287,615.62	147,853.31	12,161
Travel & Per Diem	853.58	70.22		
Total	8,225,399.47	551,515.49	272,844.86	22,441
MANUFACTURING DEVELOPMENT				
Direct Labor Hours				
Direct Labor Costs				
Overtime Premium				
Overhead				
Mat'l & Other Costs				
Sub-Contract Costs				
Travel & Per Diem				
Total				
SHIPPING				
Direct Labor Hours	284,734.6	23,441.1	224,216.0	18,442
Direct Labor Costs	589,794.52	48,551.74	466,954.41	38,407
Overtime Premium	6,092.80	501.14	4,927.97	405
Overhead	822,461.01	67,702.35	657,172.44	54,053
Material & Other Costs	436,774.48	35,925.18	393,520.25	32,367
Sub-Contract Costs	365,278.22	30,044.53	96,217.63	7,914
Total	2,220,401.03	182,724.94	1,618,792.70	133,147

EMENT OF ACCUMULATED COSTS
TRACT AF 33(600)-31174
31 December 1958

	GROUND SUPPORT EQUIPMENT			ACTUAL		
RES			M. T. U.	PROJECT	562	63
TF-102A	F-102A	TF-102A	F-102A	COSTS	F-102A	TF-102A
				658 011 6	608 038 8	49 972 8
				1 649 800 16	1 524 509 80	125 290 36
				100 599 64	92 958 70	7 640 94
				1 967 548 64	1 818 132 88	149 415 76
				3 717 948 44	3 435 601 38	282 347 06
4 159 1	19 816 7	1 629 9	150 3	1 723 052 8	1 618 138 8	104 914 0
10 152 82	51 407 61	4 228 35	340 72	3 938 058 26	3 693 122 21	244 936 05
127 88	235 28	19 34	1 19	113 564 78	109 199 57	4 365 21
12 161 10	51 069 79	4 694 05	359 75	4 310 725 38	4 039 964 91	270 760 47
				923 80	853 58	70 22
22 441 80	108 712 68	8 941 74	701 66	8 363 272 22	7 843 140 27	520 131 95
18 442 0	6 837 5	562 3		58 117 9	53 681 1	4 436 8
38 407 51	15 919 05	1 309 36		115 755 93	106 921 06	8 834 87
405 33	22 98	1 89		1 235 77	1 141 85	93 92
54 053 15	21 070 72	1 733 11		156 133 94	144 217 85	11 916 09
32 367 49	15 104 06	1 242 31		30 465 55	28 150 17	2 315 38
7 914 02	267 996 16	22 042 96		1 151 98	1 064 43	87 55
133 147 50	320 112 97	26 329 63		304 743 17	281 495 36	23 247 81

STATEMENT OF ACCU

CONTRACT AF 33(

31 December

	TOTAL CONTRACT COSTS F-102A	TOTAL CONTRACT COSTS TF-102A	SPARES F-102A	SPARES TF-102A
MANUFACTURING				
FACTORY				
Direct Labor Hours	13,101,550.3	1,059,613.3	462,198.8	38,016.1
Direct Labor Costs	26,824,027.68	2,267,543.98	1,044,173.53	85,884.43
Overtime Premium	999,809.05	23,759.79	15,487.09	1,273.84
Overhead	32,474,217.25	2,744,840.12	1,327,805.96	X 109,213.46
Sub Total	60,298,053.98	5,036,143.89	2,387,466.58	196,371.73
MATERIAL & SUB-CONTRACT				
Mat'l & Purch. Parts	111,914,914.98	9,217,691.27	43,255,537.80	3,557,814.80
Excess Usage	956,384.20	78,663.65		
Surplus & Obsolete	8,933,125.00	734,759.21		
Rework Costs	1,395,169.74	115,349.55	97,241.05	7,998.17
Vendor Program Costs	3,551,821.65	292,141.18		
Cancellation Costs	1,439,611.11	211,337.18	2,541.86	92,975.81
Sub-Contract Costs	84,242,493.44	6,927,136.12	4,661,374.23	383,403.08
Sub Total	212,433,520.12	17,577,078.16	48,016,694.94	4,042,191.86
OTHER COSTS				
Other Costs	6,852,101.67	547,964.41	461,987.79	X 18,453.78
Travel & Per Diem	312,543.69	11,715.82	1,007.88	82.89
Sub Total	7,164,645.36	559,680.23	462,995.67	18,536.67
Total Factory	279,896,219.46	23,172,902.28	50,867,157.19	4,257,100.26
FORT WORTH COSTS	37,727,950.02	20,966,466.20	1,656,109.31	2,136,850.35
POMONA COSTS	1,740,601.50	143,166.36	198,234.50	16,305.00
ASTRONAUTICS				
PALMDALE				
Direct Labor Hours	2,704,987.9	341,584.1		
Direct Labor Costs	6,497,522.60	876,319.01		
Overtime Premium	416,575.53	26,188.56		
Overhead	8,044,493.92	1,057,677.27		
Mat'l & Other Costs	502,254.62	68,653.26		
Travel & Per Diem	18,722.88	1,539.96		
Total	15,479,569.55	2,030,378.06		

MENT OF ACCUMULATED COSTS

TRACT AF 33(600)-31174

31 December 1958

ES TF-102A		GROUND SUPPORT F-102A	GROUND EQUIPMENT TF-102A	M. T. U. F-102A	ACTUAL PROJECT COSTS	562 F-102A	63 TF-102A	
38 016 1		156 373 5	12 862 0	2 152 7	13 489 560 5	12 480 825 3	1 008 735 2	
85 884 43		430 472 56	35 406 83	4 504 58	27 491 129 73	25 344 877 01	2 146 252 72	
1 273 84		3 018 39	248 27	132 73	1 003 408 52	981 170 84	22 237 68	
X 109 213 46	X	(501 781 98)	X 41 272 09	5 110 57	33 233 873 31	30 639 518 74	2 594 354 57	
196 371 73		935 272 93	76 927 19	9 747 88	61 728 411 56	56 965 566 59	4 762 844 97	✓
3 557 814 80		6 610 490 12	543 719 99	44 678 93	67 120 364 61	62 004 908 13	5 116 156 48	
					1 035 047 85	956 384 20	78 663 65	
					9 667 884 21	8 933 125 00	734 759 21	
7 998 17					1 405 280 07	1 297 928 59	107 351 38	
					3 843 962 83	3 551 821 65	292 141 18	✓
92 976 81		2 595 17	213 46		1 552 621 99	1 434 474 08	X 118 147 91	✓
383 403 08		17 022 362 26	1 400 107 72	19 446 78	67 682 935 49	62 539 310 17	5 143 625 32	
4 042 191 86		23 635 447 55	1 944 041 17	64 125 71	152 308 097 05	140 717 251 92	11 590 845 13	
X 18 433 78	X	33 833 61	2 780 53	6 473 86	6 876 536 51	6 349 806 41	526 730 10	
82 89		2 370 03	194 93		320 603 78	309 165 78	11 438 00	✓
18 536 67		36 203 64	2 975 46	6 473 86	7 197 140 29	6 658 972 19	538 168 10	
4 257 100 26		24 606 924 12	2 023 943 82	80 347 45	221 233 648 90	204 341 790 70	16 891 858 20	
2 136 850 35		454 56		4 162 80	54 896 839 20	36 067 223 35	18 829 615 85	✓
16 305 00				623 81	1 668 604 55	1 541 743 19	126 861 36	✓
					3 046 572 0	2 704 987 9	341 584 1	
					7 373 841 61	6 497 522 60	876 319 01	
					442 764 09	416 575 53	26 188 56	
					9 102 171 19	8 044 493 92	1 057 677 27	
					570 907 88	502 254 62	68 653 26	
					20 262 84	18 722 88	1 539 76	
					17 509 947 61	15 479 569 55	2 030 378 06	

STATEMENT OF ACC

CONTRACT AF 33

31 Decemb

	TOTAL CONTRACT COSTS		SPARES	
	F-102A	TF-102A	F-102A	TF-102A
TOTAL CUSTOMER SERVICES COST	1,906,785.97	154,289.01	81,446.42	6,645.76
TOTAL CUSTOMER SERVICES HOURS	305,605.0	24,223.9	21,695.2	1,784.5
TOOLING				
TOOL ENGINEERING				
Direct Labor Hours	529,053.0	53,450.4	12,221.2	1,005.2
Direct Labor Costs	1,369,050.85	143,569.46	38,179.98	3,140.35
Overtime Premium	48,143.77	3,740.61	251.85	20.72
Overhead	993,033.76	101,709.28	25,414.71	2,090.39
Travel & Per Diem				
Total	2,410,228.38	249,019.35	63,846.54	5,251.46
TOOL MANUFACTURING				
Direct Labor Hours	929,727.0	133,638.5	6,036.5	496.5
Direct Labor Costs	2,158,541.94	302,244.69	15,527.87	1,277.19
Overtime Premium	115,513.84	13,209.03	106.57	8.77
Overhead	2,211,090.42	313,909.52	17,880.40	1,470.68
Mat'l & Purch. Parts	275,870.68	24,651.77	5,033.06	413.99
Other Costs	703,810.86	61,309.37	6,874.79	565.45
Sub-Contract Costs	538,542.09	63.01	800.19	63.01
Travel & Per Diem	1,903.94	149.98		
Total	6,005,273.77	715,537.37	46,222.88	3,799.09
PLANT ENGINEERING				
Direct Labor Hours	245,781.4	19,492.9		
Direct Labor Costs	584,817.32	46,244.86		
Overtime Premium	13,363.54	1,086.25		
Overhead	645,151.01	51,285.20		
Material & Other Costs	713,692.37	57,689.39		
Subcontract Costs	44,188.27	3,634.53		
Sound Suppression	672,450.44	55,309.78		
Special Test Equip.	150,602.76	12,387.24		
Total	2,824,265.71	227,637.25		
TOTAL TOOLING COSTS	11,239,767.86	1,192,193.97	110,069.42	9,050.55
TOTAL TOOLING HOURS	1,704,561.4	206,581.8	18,257.7	1,501.7

ENT OF ACCUMULATED COSTS

RACT AF 33(600)-31174

31 December 1958

Page 3 of 6

F-102A	GROUND SUPPORT EQUIPMENT F-102A	GROUND SUPPORT EQUIPMENT TF-102A	M.T.U. F-102A	ACTUAL PROJECT COSTS	562 F-102A	63 TF-102A
6 645 76	11 198 70	921 09		1 960 863 01	1 814 140 85	146 722 16
1 784 5	3 601 3	296 2		302 251 7	280 308 5	21 943 2
1 005 2	192 7	15 9		569 068 4	516 639 1	52 429 3
3 140 35	468 23	38 57		1 470 793 24	1 330 402 64	140 390 60
20 72				51 611 81	47 891 92	3 719 89
2 090 39	335 82	27 62		1 066 874 50	967 283 23	99 591 27
5 251 46	804 05	66 13		2 589 279 55	2 345 577 79	243 701 76
496 5	399 7	32 8	13 5	1 056 386 5	923 277 3	133 109 2
1 277 19	1 029 18	84 65	30 34	2 442 837 40	2 141 954 55	300 882 85
8 77				128 607 53	115 407 27	13 200 26
1 470 68	1 231 77	101 32	31 15	2 504 284 62	2 191 947 10	312 337 52
413 99	3 493 67	287 36		291 294 37	267 343 95	23 950 42
565 45	76 625 71	6 302 55		674 751 73	620 310 36	54 441 37
63 01				537 741 90	537 741 90	
				2 053 92	1 903 94	149 98
3 799 09	82 380 33	6 775 88	61 49	6 581 571 47	5 876 609 07	704 962 40
				265 274 3	245 781 4	19 492 9
				631 062 18	584 817 32	46 244 86
				14 449 79	13 363 54	1 086 25
				696 436 21	645 151 01	51 285 20
				771 381 76	713 692 37	57 689 39
				47 822 80	44 188 27	3 634 53
				727 760 22	672 450 44	55 309 78
				162 990 00	150 602 76	12 387 24
				3 051 902 96	2 824 265 71	227 637 25
9 050 55	83 184 38	6 842 01	61 49	12 222 753 98	11 046 452 57	1 176 301 41
1 501 7	592 4	48 7	13 5	1 890 729 2	1 685 697 8	205 031 4

STATEMENT OF AC

CONTRACT AF 3

31 Decemb

	TOTAL CONTRACT COSTS F-102A	TOTAL CONTRACT COSTS TF-102A	SPARES F-102A	SPARES TF -102A
HOLLOMAN				
Direct Labor Hours	14 545 0	324 1		
Direct Labor Costs	39 519 47	889 03		
Overtime Premium	1 536 19	1 02		
Overhead	54 219 32	1 165 00		
Material & Other Costs	3 657 33	292 92	1 185 45	
Travel & Per Diem	21 626 50			
Total	120 558 81	2 347 97	1 185 45	
TOTAL ENGINEERING COSTS	9 956 003 80	1 026 145 75	1 185 45	
TOTAL ENGINEERING HOURS	1 213 475 0	138 093 1		
CUSTOMER SERVICES				
SERVICE ENGINEERING				
Direct Labor Hours	24 078 0	1 980 4		
Direct Labor Costs	77 376 17	6 364 27		
Overtime Premium	195 24	16 06		
Overhead	80 457 20	6 617 69		
Material & Other Costs				
Travel & Per Diem	158 028 61	12 998 02		
Total				
SERVICE PUBLICATION			Parts Ca	
Direct Labor Hours	192 638 6	14 732 2	21 695 2	1 784 5
Direct Labor Costs	472 877 46	36 603 79	48 868 66	4 019 5
Overtime Premium	26 801 91	2 052 36	2 201 24	181 06
Overhead	465 670 79	35 619 91	16 288 84	1 339 76
Material & Other Costs	136 346 78	11 214 69	13 439 76	1 105 44
Travel & Per Diem	4 185 79	289 71	647 92	
Total	1 105 882 73	85 780 46	81 446 42	6 645 76
FIELD SERVICE REPS. Field Service				
Direct Labor Hours	88 888 4	7 311 3		
Direct Labor Costs	293 217 17	25 509 80		
Overtime Premium	2 385 80	192 69		
Overhead	73 779 85	7 313 07		
Material & Other Costs	6 245 53	513 70		
Travel & Per Diem	267 246 28	21 981 27		
Total	642 874 63	55 510 53		

ATEMENT OF ACCUMULATED COSTS

CONTRACT AF 33(600)-31174

31 December 1958

		GROUND			ACTUAL		
ARES		SUPPORT	EQUIPMENT	M.T.U.	PROJECT	562	63
	TF -102A	F-102A	TF-102A	F-102A	Costs	F-102A	TF-102A
					14,869.1	14,545.0	324.1
					40,408.50	39,519.47	889.03
					1,537.21	1,536.19	1.02
					55,384.32	54,219.32	1,165.00
45			117.85		2,646.95	2,471.88	175.07
					21,626.50	21,626.50	
45			117.85		121,603.48	119,373.36	2,230.12
45		949,581.92	78,221.99	331,752.02	9,621,408.17	8,673,484.41	947,923.76
		97,495.4	8,019.1	10,371.8	1,235,681.8	1,105,607.8	130,074.0
					26,058.4	24,078.0	1,980.4
					83,740.44	77,376.17	6,364.27
					211.30	195.24	16.06
					87,074.89	80,457.20	6,617.69
					171,026.63	158,028.61	12,998.02
	Parts Cataloging						
52	1,784.5	3,601.3	296.2		179,993.6	167,342.1	12,651.5
866	4,019.50	8,076.29	664.28		447,852.52	415,932.51	31,920.01
194	181.06	429.01	35.28		26,007.68	24,171.66	1,836.02
884	1,339.76	2,693.40	221.53		480,747.17	446,688.55	34,058.62
976	1,105.44				133,016.27	122,907.02	10,109.25
792					3,827.58	3,537.87	289.71
642	6,645.76	11,198.70	921.09		1,091,451.22	1,013,237.61	78,213.61
					96,199.7	88,888.4	7,311.3
					318,726.97	293,217.17	25,509.80
					2,578.49	2,385.80	192.69
					81,092.92	73,779.85	7,313.07
					6,759.23	6,245.53	513.70
					289,227.55	267,246.28	21,981.27
					698,385.16	642,874.63	55,510.53

STATEMENT OF ACCUM

CONTRACT AF 33(

31 Decembe

	TOTAL CONTRACT COSTS F-102A	TOTAL CONTRACT COSTS TF-102A	SPARES F-102A	SPARES TF-102A
ENGINEERING				
+ **DESIGN & LIAISON**				
Direct Labor Hours	1,121,573.5	132,771.6		
Direct Labor Costs	3,422,488.79	404,055.45		
Overtime Premium	144,432.43	17,654.48		
Overhead	3,045,720.63	357,576.80		
Material & Other Costs	1,504,873.04	128,736.98		
Sub-Contract Costs	1,018,888.58	62,403.71		
Travel & Per Diem	198,927.43	20,802.10		
Total	9,335,330.90	991,229.52		
+ **EXPERIMENTAL FACTORY**				
Direct Labor Hours	58,403.2	4,512.4		
Direct Labor Costs	141,620.81	10,892.15		
Overtime Premium	5,284.43	409.42		
Overhead	149,528.11	11,388.42		
Material & Other Costs	74,690.08	6,143.34		
Sub-Contract Costs	10,974.15	902.64		
Travel & Per Diem	905.47	74.48		
Total	383,003.05	29,810.45		
WIND TUNNEL	Labor no overhead 18.5			
Direct Labor Hours	1,299.6	54.8		
Direct Labor Costs	3,859.55	152.19		
Overtime Premium	118.60	6.40		
Overhead	1,746.82	1.15		
Material & Other Costs	94.79	7.80		
Sub-Contract Costs				
Total	5,819.76	167.54		
EDWARDS				
Direct Labor Hours	17,653.7	430.2		
Direct Labor Costs	49,486.99	1,173.99		
Overtime Premium	1,052.53	8.41		
Overhead	60,751.76	1,408.27		
Material & Other Costs				
Travel & Per Diem				
Total	111,291.28	2,590.67		

TEMENT OF ACCUMULATED COSTS

CONTRACT AF 33(600)-31174

31 December 1958

RES TF-102A		GROUND SUPPORT EQUIPMENT F-102A	GROUND SUPPORT EQUIPMENT TF-102A	M.T.U. F-102A	ACTUAL PROJECT COSTS	562 F-102A	63 TF-102A
		97 495 4	8 019 1	10 371 8	1 138 458 8	1 013 706 3	124 752 5
		266 813 73	21 945 73	30 711 06	3 507 073 72	3 124 964 00	382 109 72
		10 180 41	837 35	1 423 03	149 646 12	132 828 99	16 817 13
		271 473 56	22 328 98	27 685 90	3 081 808 99	2 746 561 17	335 247 82
		143 908 31	11 836 62	10 497 96	1 467 367 13	1 350 466 77	116 900 36
		245 675 18	20 207 04	260 190 58	555 219 49	513 022 82	42 196 67
		11 530 73	948 42	1 243 49	206 006 89	186 153 21	19 853 68
		949 581 92	78 104 14	331 752 02	8 967 122 34	8 053 996 96	913 125 38
					62 915 6	58 403 2	4 512 4
					152 512 96	141 620 81	10 892 15
					5 693 85	5 284 43	409 42
					160 916 13	149 528 11	11 388 02
					80 833 42	74 690 08	6 143 34
					11 876 79	10 974 15	902 64
					979 95	905 47	74 48
					412 813 10	383 003 05	29 810 05
						18 5	
					1 354 4	1 299 6	54 8
					4 011 74	3 859 55	152 19
					125 00	118 60	6 40
					1 747 97	1 746 82	1 15
					102 59	94 79	7 80
					5 987 30	5 819 76	167 54
					18 083 9	17 653 7	430 2
					50 660 98	49 486 99	1 173 99
					1 060 94	1 052 53	8 41
					62 160 03	60 751 76	1 408 27
					113 881 95	111 291 28	2 590 67

```
                                                                             ENGI

                                                                             DESI
DIR LABOR HRS       13503098     12344235                           974954
DIR LABOR AMT      414473122    382526070                         26681373
OVERTIME            16463918     15219839                          1018041
OVERHEAD           348373295    316224451                         27147356
MAT OTHER ALLO     103219971     86595682                         14390831
SUBCONTRACT        108129229     55521949                         24567518
TRAV PER DIEM       21972953     20600689                          1153073
GROUP TOTAL       1012632488    876688680                         94958192
                                                                             EXPE

DIR LABOR HRS         629156       629156
DIR LABOR AMT       15251296     15251296
OVERTIME              531951       531951
OVERHEAD            16091613     16091613
MAT OTHER ALLO       8120776      8120776
SUBCONTRACT          1187679      1187679
TRAV PER DIEM          97995        97995
GROUP TOTAL         41281310     41281310
                                                                             WIND

DIR LABOR HRS          13544        13544
DIR LABOR AMT         401174       401174
OVERTIME               12500        12500
OVERHEAD HOURS           185          185
OVERHEAD COSTS        174797       174797
MAT OTHER ALLO         10259        10259
GROUP TOTAL           598730       598730
                                                                             EDWA

DIR LABOR HRS         180839       180839
DIR LABOR AMT        5066098      5066098
OVERTIME              106094       106094
OVERHEAD             6216003      6216003
GROUP TOTAL         11388195     11388195
                                                                             HOLI

DIR LABOR HRS         148691       148691
DIR LABOR AMT        4040850      4040850
OVERTIME              153721       153721
OVERHEAD             5538432      5538432
MAT OTHER ALLO        395025       264695      118545                11785
TRAV PER DIEM        2162650      2162650
OTHER COSTS
GROUP TOTAL         12290678     12160348      118545                11785
DEPT HOURS TOT      14475513     13316650                           974954
DEPT COSTS TOT    1078191401    942117263      118545             94969977
                                                                             CUS

                                                                             SER

DIR LABOR HRS         260584       260584
DIR LABOR AMT        8374044      8374044
OVERTIME
```

DEC 59 AF-31

ENGINEERING				
DESIGN AND LIAISION				
974954	80191	103718	11023776	1320459
26681373	2194573	3071106	341768222	40757848
1018041	83735	142303	13519056	1700783
27147356	2232898	2768590	281973355	34251096
14390831	1183662	1049796	79476363	7119319
24567518	2020704	26019058	51302282	4219667
1153073	94842	124349	18615321	1985368
94958192	7810414	33175202	786654599	90034081
EXPERIMENTAL FACTORY				
			584032	45124
			14162081	1089215
			493854	38097
			14952811 98.45	1138802
		345.89	7503597	617179
			1097415	90264
			90547	7448
			38300305	2981005
WIND TUNNEL				
			12996	548
			385955	15219
			11860	640
			185	
			174682	115
			9479	780
			581976	16754
EDWARDS				
			176537	4302
			4948699	117399
			105253	841
			6075176	140827
			11129128	259067
HOLLOMAN				
			145450	3241
			3951947	88903
			153619	102
			5421932	116500
11785			247188	17507
			2162650	
			11937336	223012
11785		103718	11942976	1373674
974954	80191	33175202	848603344	93513919
94969977	7810414			
CUSTOMER SERVICE				
SERVICE ENGINEERING				
			240780	19804
			7737617	636427
			19524	1606
			8045720	661769

	21130	21130				
OVERHEAD	8707489	8707489				
GROUP TOTAL	17102663	17102663				
					SERVICE	
DIR LABOR HRS	2073708	1799936	216952	17845	36013	
DIR LABOR AMT	50948125	44785252	4886866	401950	807629	6
OVERTIME	2885427	2600768	220124	18106	42901	
OVERHEAD	50129070	48074717	1628884	133976	269340	2
MAT OTHER ALLO	75573044	74118524	1343976	110544		
TRAV PER DIEM	447550	382758	64792			
GROUP TOTAL	179983216	169962019	8144642	664576	1119870	9
					FIELD SE	
DIR LABOR HRS	2350	2350				
DIR LABOR AMT	53999	53999				
OVER TIME	2622	2622				
OVERHEAD	65743	65743				
TRAV PER DIEM	28922755	28922755				
GROUP TOTAL	29045119	29045119				
DEPT HOURS TOT	2336642	2062870	216952	17845	36013	
DEPT COSTS TOT	226130998	216109801	8144642	664576	1119870	9
					TOOLING	
					TOOL ENG	
DIR LABOR HRS	5825034	5690684	122212	10052	1927	
DIR LABOR AMT	151262031	147079324	3817998	314035	46823	
OVERTIME	5188438	5161181	25185	2072		
OVERHEAD	109474304	106687450	2541471	209039	33582	
GROUP TOTAL	265924773	258927955	6384654	525146	80405	
					TOOL MAN	
DIR LABOR HRS	10633655	10563865	60365	4965	3997	
DIR LABOR AMT	246078663	244283740	1552787	127719	102918	8
OVERTIME	12872287	12860753	10657	877		
OVERHEAD	252499994	250428462	1788040	147068	123177	1
SUBCONTRACT	53860510	53774190	80019	6301		
TRAV PER DIEM	205392	205392				
MAT N PURC PTS	30061029	29129491	511373	42062	349367	2
OTHER COSTS	76503185	67475065	679412	55882	7662571	63
GROUP TOTAL	672081060	658157093	4622288	379909	8238033	67
					PLANT EN	
DIR LABOR HRS	2652743	2652743				
DIR LABOR AMT	63106218	63106218				
OVERTIME	1444979	1444979				
OVERHEAD	69643621	69643621				
MAT OTHER ALLO	77138176	77138176				
SUBCONTRACT	4782280	4782280				
SPEC TEST EQUP	16299000	16299000				
SOUND SUPPRESS	72776022	72776022				
GROUP TOTAL	305190296	305190296				
DEPT HOURS TOT	19111432	18907292	182577	15017	5924	
DEPT COSTS TOT	1243196129	1222275344	11006942	905055	8318438	68
					MANUFACTU	
					FACTORY	

```
                                                                      DEC  59

                                                 15802861     1299802
                                ICATION
                   SERVICE PUBL
                                                  1673421      126515
   17845       36013        2962                 41593251     3192001
  401950      807629       66428                  2417166      183602
   18106       42901        3528                 44668855     3405862
  133976      269340       22153                 68485515     5633009
  110544                                           353787       28971
                                                157518574    12443445
  664576     1119870       92109E
                   FIELD SERVIC
                                                     2171         179
                                                    49895        4104
                                                     2423         199
                                                    60747        4996
                                                 26724628     2198127
                                                 26837693     2207426
                                                  1916372      146498
   17845       36013        2962                200159128    15950673
  664576     1119870       92109
                   TOOLING
                                RING
                   TOOL ENGINEE
                                                  5166391      524293
   10052        1927         159                133040264    14039060
  314035       46823        3851                  4789192      371989
    2072                                         96728323     9959127
  209039       33582        2762                234557779    24370176
  525146       80405        6613TURING
                   TOOL MANUFAC
                                         135      9232773     1331092
    4965        3997         328        3034    214195455    30088285
  127719      102918        8465                 11540727     1320026
     877                                3115    219194710    31233752
  147068      123177       10132                 53774190
    6301                                           190394       14998
                                                 26734395     2395096
   42062      349367       28736                 61954853     5520212
   55882     7662571      630255        6149    587584724    70572369
  379909     8238033      677588ERING
                   PLANT ENGINE
                                                  2457814      194929
                                                 58481732     4624486
                                                  1336354      108625
                                                 64515101     5128520
                                                 71369237     5768939
                                                  4418827      363453
                                                 15060276     1238724
                                                 67245044     5530978
                                                282426571    22763725
                                         135     16856978     2050314
   15017        5924         487        6149   1104569074   117706270
  905055     8318438      684201G
                   MANUFACTURIN
                   FACTORY
```

	+ 80.0					
DIR LABOR HRS	141612436	134896405	4621988	380161	1563735	
DIR LABOR AMT	2909157034	2749112973	104417231 132	8588433	43047256	3
OVERTIME	102357016	100340852	1548831	127394	301839	
OVERHEAD	3521905737	3323387331	132780596	10921346	50178198	4
GROUP TOTAL	6533419787	6172841156	238746658	19637173	93527293	7
						MATERI
SUBCONTRACT	9117131804	6768297257	466290013	38352858	1702236226	140
MAT N PURC PTS	12113094452	6712036851	4325401190	355768930	661047698	54
EXCESS USAGE	103504785	103504785				
SURPLUS N OBSO	966788421	966788421				
REWORK	151051929	140528007	9724105	799817		
VENDOR PROG CO	384396283	384396283				
CANCELLATION	165094829	155262199	254186	9297581	259517	
GROUP TOTAL	23001062503	15230813803	4801669494	404219186	2363543441	194
						OTHER
TRAN PER DIEM	32425951	32060378	100788	8289	237003	
OTHER COSTS	739999360	687649710	46195194	1845083	3383890	
GROUP TOTAL	772425311	719710088	46295982	1853372	3620893	
						FT WOR
SUBCONTRACT	5850452583	5850452583				
GROUP TOTAL	5850452583	5850452583				
						POMONA
SUBCONTRACT	188376786	188376786				
GROUP TOTAL	188376786	188376786				
						PALMDA
DIR LABOR HRS	30465720	30465720				
DIR LABOR AMT	737384161	737384161				
OVERTIME	44276409	44276409				
OVERHEAD	910217119	910217119				
MAT OTHER ALLO	57091589	57090739			785	
TRAV PER DIEM	2026284	2026284				
GROUP TOTAL	1750995562	1750994712			785	
						PALMDA
DIR LABOR HRS	6580116	6580116				
DIR LABOR AMT	164980016	164980016				
OVERTIME	10059964	10059964				
OVERHEAD	196754864	196754864				
GROUP TOTAL	371794844	371794844				
						INSPEC
DIR LABOR HRS	17993726	17230528	505638	41591	198167	
DIR LABOR AMT	412762438	393805826	12343662	1015282	5140761	
OVERTIME	11550340	11356478	155493	12788	23528	
OVERHEAD	453286338	431072538	14785331	1216110	5706979	
TRAV PER DIEM	96260	92380	3585 Facty Oth	295 Facty Other		
GROUP TOTAL	877695376	836327222	27288071	2244475	10871268	
						SHIPPI
DIR LABOR HRS	3081757	581179	2242160	184420	68375	
DIR LABOR AMT	63834626	11575593	46695441	3840751	1591905	
OVERTIME						

```
                                               940          62
1563735         128620
3047256        3540683      21527    124808993    (10087412)
 301839          24827     450458   2534487701    214625272
0178198        4127209      13273     98119597      2221255
3527293        7692719     511057   3063951874    259435457
       MATERIAL N S        974788   5696559172    476281984
                 UBCONTRACTIN
2236226      140010772
1047698       54371890    1944678   6253934443    514362814
                          4467893   6200420813    511616038
                                      95638420      7866365
                                     893312500     73475921
                                     129792869     10735138
 259517          21346               355182165     29214118
3543441      194404008               143447408     11814791
       OTHER COSTS        6412571  14071728618   1159085185

 237003          19493
3383890         278097                30916578      1143800
3620893         297590     647386    634977372     52672338
       FT WORTH COS        647386    665893950     53816138
                 TS

                                    5487419213    363033370
       POMONA COSTS                 5487419213    363033370


                                     175702202     12674584
       PALMDALE                      175702202     12674584


                                      27049879      3415841
                                     649752260     87631901
                                      41657553      2618856
    785             65               804449392    105767727
                                      50225413      6865326
    785             65                 1872288       153996
       PALMDALE INS                 1547956906    203037806
                 PECTION

                                       6080388       499728
                                     152450980     12529036
                                       9295870       764094
                                     181813288     14941576
       INSPECTION                    343560138     28234706

 198167          16299                [illegible] 3.7   [illegible] 3.7
5140761         422835       1503     16181425      1049103
  23528           1934      34072    369313158     24492668
5706979         469405        119     10919992       436486
                            35975    403997741     27074797
0871268         894174                   85358         7022
       SHIPPING             70166    784316249     52010973

  68375           5623
1591905         130936                  536811        44368
                                      10692106       883487
```

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                        659394      123577      492797      40533       2298
OVERHEAD              89016336    15613394    65717244    5405315    2107072          17
MAT OTHER ALLO        47269545     3046134    39352025    3236749    1510406          12
SUBCONTRACT           39532275      115198     9621763     791402   26799616         220
NOT ASSIGNED               421         421
GROUP TOTAL          240312597    30474317   161879270   13314750   32011297         263
                                                                             PRODUCTI

DIR LABOR HRS           356882      356882
DIR LABOR AMT         16193019    16193019
OVERTIME                297436      297436
OVERHEAD              17529632    17529632
MAT OTHER ALLO          253613      253613
TRAV PER DIEM          3373653     3373653
GAS N OIL            119851540   119851540
GROUP TOTAL          157498893   157498893
DEPT HOURS TOT       200090637   190110830     7369786     606172    1830277          15
DEPT COSTS TOT     39744034242 31309284404  5275879475  441268956 2503574977       20592
CONT HOURS TOT       236014224   224397642     7769315     639034    2847168          23
CONT COSTS TOT     42291552770 33689786812  5295149604  442838587 2607983262       21450
```

97

764
165.7
- 48.5 OT
18.6
20.0

23,601,422.4
-80.0
23,601,342.4

DEC 59 AF

2298	189			
2107072	173311		114185	9392
1510406	124231		14421785	1191609
26799616	2204296		2814628	231506
			106443	8755
32011297	2632963		389	32
	PRODUCTION F		28149536	2324781
		LIGHT		
			329012	27870
			14995754	1197265
			284962	12474
			16216256	1313376
			25412	228201
			3112605	261048
			106538940	13312600
1830277	150542		141173929	16324964
2503574977	205921519	23030	174986508	15124322
2847168	234182	8104911	28942459913	2366824491
2607983262	214508243	126883	205702834	18694808
		41286262	31095791459	2593995353

423 105, 418.09
422, 915, 527.70

AF 33(600) 31174

Reconciliation Engineering + Field Service Reps.

December 1958

7207 BUFF
G7207 GREEN TINT

1	2	3	4	5	6	7
F	Coded Tab Run	To Field Service				
Engineering	11023776	888884			10134892	
Labor	341768222	29321717			312446505	
OT	13519056	236157			13282899	
Ovhd	281973355	598148	<7845387>		274656116	
	Coded Tab 18602 Run	November Report	December Input 18447			
Field Service Labor	2171	849531	37182		888884	
	49895	27964464	1307358		29321717	
	2423	236157	-0-		238580	
	60747	7845386	<598148>		7377985	
TF Engineering	1320459	<73113>	179		1247525	
Labor	40757848	<2550980>	4104		38210972	
OT	1720783	<19070>			1681713	
Ovhd	34251096	43441	<796751>	26996	33524782	
	Coded Tab Run	November Report	December in Put			
Field Service	179	69876	3058		73113	
	4104	2439346	107530		2550980	
	199	19070	-0-		19269	
	4996	769752	<43441>		731307	
		919407	40240		961997	
		30403810	1414888		31872697	
		255227	—		257849	
		8615138	<521589>		8109292	

TOTAL-843299

7207 BUFF
G7207 GREEN TINT

1	5	6
Serv Out Matl + O/C	684855 15	56330 09
to Engr Matl O/C	<561948 13>	<46220 84>
New Total	122907 02	10109 25
Engr Matl + O/C	794764 17	71193 19
From Service Out	561948 13	46220 84
New Engineering Total	1356712 30	117414 03
Engineering Matl + O/C	1356712 30	117414 03
to Field Service Reps	<6245 53>	<513 07>
New Engr Matl + O/C	1350466 77	116900 36

7207 BUFF
G7207 GREEN TINT

AF 33(600)31674
Reconciliation of Cost statement to trial Balance

1	2	3	4	5	6	7
W/O	Airplane		Spares		A G E	
Number	Hours	Amt	Hours	Amt	Hours	Amt
18000	21702852	28815294157				
18100	141756954	66204833307				
18200	12338696	61385592 33				
18300	<10>	<464>				
18400	33477800	22446699 68				
18500	1573548	1290966 34				
18600	13398129	8735 70199				
18700			8408349	6122099460		
18800						
18895						2822537499
18900	148873	8174856				
2360 1342 4	224396842	33051153890	8408349	6122099460	3081350	2822534499
18899	622-1-1-11			<600125>		600125
18889	6-222-1-11			<49361>		49361
				<649486>		649486
Cost ledger				6122099460		2822534499
Report				6139387593		2821887473
				17288133		<64702[illegible]>
Report				6139387593		2821875690
				<649486>		649356
				6138738107		2822595946
Cost ledger				6122099460		2822534499
				16638647		925
F.W. Statement				379295966		4545
F.W. Cost Ledger				362567708		4299
				16728258		246
Pomona Cost Statement				91453950		-0-
Pomona Cost Ledger				91543561		-0-
				89611		
		[illegible]		16728258		649486
		[illegible]		<89611>		647024
				16638647		246

AF 33(600)31474

Reconciliation of Cost statement to trial Balance

	rplane Amt	Spares Hours	Spares Amt	S & E Hours	S & E Amt	G T E Hours	G T E Amt
2	288152941 57						
4	66204833 07						
6	61386552 33						
0>	< 4 64 >						
0	22446699 68						
8	1290966 34						
9	8735701 99						
		840834 9	61220994 60				
					28225374 99	12688 3	417649 21
3	81948 56						
2	33051532 70	840834 9	61220994 60	308135 0	28225344 99	12688 3	417649 21
11			< 6001 25 >		6001 25		
11			< 493 61 >		493 61		
			< 6494 86 >		6494 86		
			61220994 60		28225344 99		417649 21
			61393875 93		28218874 75		417649 21
			172881 33		< 6470 24 >		-0-
			61393875 93		28218756 90		
			< 6494 86 >		6493 56		
			61387381 07		28225259 46		
			61220994 60		28225344 79		
			166386 47		92 53		
			3792959 66		454 56		
			3625677 08		429 94		
			167282 58		24 62		
			214539 50		-0-		
			215435 61		-0-		
			896 11				
	[illegible]		167282 58		6494 86		
	[illegible]		< 896 11 >		6470 24		
			166386 47		24 62		

Contract AF 33(600)31174
December 31, 1958
Fort Worth Costs

12-7 BUFF 37-L07 GREEN TINT

1	2	3	4	5	6	7
	taken from Fort Worth Cost Ledger Dated 11-30-58					
Q/10	Spares F Hours	Amount				
37-62XXX	970120	158665481				
allocation	107235	6945450				
Total	1077355	165610931				
	TF			Transfer to 81 Balance		5850452583
37-61-XXX	1247730	205629513		Less Spares F		165610931
allocation	124375	8055522		Less Spares TF		213685035
Total	1372105	213685035		Less G&E F		45456
				Less MTQL F		416280
				Project		5470694881
Unidentified Split to F 46.3%	F + TF per actuals TF 53.7%					
				Project +992	F 65.7	TF 34.3
37-52001	24670	1662263		5470694881	3594246536	1876448345
37-52002	2420	1236496		18989039	12475799	6513240
37-52003	760	40492			3606722335	1882961585
37-60XXX	203760	12061731				
	231610	15000972				
	G&E					
37-63XXX	850	45456				
	MTQL					
37-81-001	2550	416280				

Contract AF 33(600)31174
December 31, 1958

7207 BUFF
G 7207 GREEN TINT

From Pomona Cost Ledger

	Project	Spares	MT Els	Total
12-31-57	1622638 51	89932 68	623 81	1713195 00
11-30-58	45966 04	124606 82	-0-	170572 86
	1668604 55	214539 50	623 81	1883767 86

Pomona December Balance (680)	1883767 86
Less Spares	214539 50
Less MT Els	623 81
Project	

	Total	F 92.4%	TF 7.6
Project	1883767 86	1740601 50	143166 36
Spares	214539 50	198234 50	16305 00
MT Elp.	623 81	623 81	
Total	1668604 55	1541743 19	126861 36

Control Sheet
31174
December 31, 1957

1 of 2

	E		TE		total	
	Hours	Amt	Hours	Amt	Hours	Amt
ENG						
TAB	1043319 2	7296765 66	85279 9	59268917	1128599 1	788945473
(32) CHE	116412 2	105701070	9575 0	8694027	125987 2	114395097
(43) MTU	10371 8	33175202			10371 8	33175202
	1170103 2	868552828	94854 9	67962944	1264958 1	936515772
(2) Engr Fact TAB	43843 7	27331219	3606 0	2247942	47449 7	29579161
(3) WIND TUNNEL TAB	540 6	154429	44 5	12701	585 1	167130
(5) TOOL ENG	516465 2	234242281	48691 3	22401787	565156 5	256644068
(65) CHE	3090 4	1525113	254 2	125443	3344 6	1650556
(66) SPARES	3858 5	1850870	317 4	152236	4175 9	2003106
FROM 6-1		<240597>				<240597>
	423414 1	237377667	49162 9	22679466	572577 0	260057133
TOOL MFG.						
(4) TAB	939828 8	597083297	125450 8	71926063	1065279 6	669009290
(41) SPARES	1662 6	1033844	136 8	85037	1799 4	1118881
(35) CHE	1940 8	4366222	159 7	360546	2100 5	4726768
(45) MTU	1 5	650			1 5	650
To 5-144		222312		18285		240597
	943433 7	602706255	125747 3	72389931	1069181 0	675096186
(6) PLANT ENGR	240355 1	192899365	18847 6	15298241	259202 7	208197606
(50) M-G3		17120322		1408165		18528487
(511) Serv'd Supp		67133930		5521838		72655768
	240355 1	277153617	18847 6	22228244	259202 7	299381861
(8) FIELD SERV TAB	41941 1	27915951	3426 6	2273576	45367 7	30189527

92.4
7.6

Control Sheet 31174

3 of 3

	F		TF		TOTAL	
	Hours	Amt	Hours	Amt	Hours	Amt
(9) Mfg TAB	124370315	18143528136	8847282	1459359808	133217597	19902880944
(1) " S/A 619			<625>		<625>	
(13) PKG COST		2864449482		23560779		310010261
(22) EXCESS USAGE		50839793		4181628		55021421
(23) CANCEL COST		125703343		10205056		135908399
(25) SCRP + OBS		416251288		34237121		450488409
(26) SPARES	1774551	1647704226	145961	135525196	1920512	1783229422
(32) GHE.	346581	1880909218	28506	154706656	375087	2033615874
(40) MTU	21540	7104997			21540	7104997
(52) REWORK		78406496		6449020		84855516
(35) CANCEL SPARE				20115769		20115769
(57) CANCL GHE		175408				175402
	126512987	22937072381	9021124	1848334033	135534111	24785406414
(10) SHIPPING	351067	17975568	29091	1487964	380158	19463532
(28) SPARES	689656	37273269	56150	3065769	738806	40339038
(31) GHE	3812	17600139	313	1447699	4125	19047768
	1037535	79848976	85554	6001362	1123089	78850338
(11) PROD FLITE	193415	117765649	14539	9381067	207954	127146716
FROM 21-144	99600	8701268	5743	491056	105343	9192324
	293015	126466917	20282	9872123	313297	136339040
(12) INSPECTION	15224528	730274068	829384	40073386	16054112	770347454
(27) SPARES	159919	7217367	12577	593633	165496	7811000
(33) GHE	95755	4768960	7877	392252	103632	5161212
(41) MTU	1498	85639			1498	85639
	15474700	742346034	850038	41059271	16324738	783405305

21919079	Per tab Run		
21919016 9	Cost Statement	Total Per Cost Statement	35701838573
<625>	619 S/A	Less F.T. [illegible]	<60237636>
		Total Coded tab Run.	35641600937

7201 BUFF
07207 GREEN TINT

Control Sheet 31174

December 1958

2 of 3

	F		FF		TOTAL	
	Hours	Amt	Hours	Amt	Hours	Amt
⑯ SERV PUB	1647795	145185094	135532	11941629	1783327	157126793
(58) SPARES	30739	1001061	2528	89338	33267	1083399
(59) GHE	1801.	163629	417	13459	6278	177088
	1684335	146349784	138537	12037426	1822872	158387210
⑲ EDWARDS	84485	5344693	4308	272191	88793	5616884
⑳ HOLLOMAN	136331	11108786	2751	173183	139082	11281969
㉑ PALMDALE	24201648	1361600198	1640849	92845232	25842497	1454445360
TO 11-44	<99600>	<8701268>	<5743>	<491056>	<105343>	<9199394>
	24102048	1352898860	1635106	92354176	25737154	1446253036
PALMDALE INSP	5094770	285275816	419050	93464245	5513820	308740061
14 FTWORTH (681)						
PROJECT		3577905373		1867917112		5445822483
SPARES		69768910		70346046		140114956
MTU		275327				275327
GHE		38097				38097
		3647987707		1938263158		5586250865
15 POMONA						
PROJECT		150056912		12342343		162399255
SPARES		8186366		673338		8859704
MTU		61792				61722
						171390681

1812-1 $1,201

31174

Coded Tab Run	$ 356,416,009.37
I-D.I.	602,376.36
Corrected Tab Run	$ 357,018,385.73
Trial Balance Total	$ 356,523,335.26
Less: Jo 12-84 Airplanes	80,004.18
Jo. 12-84 Airplanes	27,321.71
Plus: I.D.I.	602,376.36
Corrected Trial Balance	$ 357,018,385.73

STATEMENT OF ACCU
CONTRACT AF 3
31 Decemb

	Total Contract Costs		Spares		Gro Support
	F-102A	TF-102A	F-102A	TF-102A	F-102A
ENGINEERING					
DESIGN AND LIAISON					
Direct Labor Hours	1,170,103.2	94,854.9			116,412.2
Direct Labor Costs	3,573,104.18	289,775.27			332,004.83
Overtime Premium	148,297.13	12,006.19			9,198.64
Overhead	3,181,137.88	257,879.60			323,594.57
Subcontract Costs	922,416.51	54,468.79			174,875.94
Material & Other Costs	683,083.77	51,354.53			206,933.18
Travel & Per Diem	177,488.81	14,145.06			10,403.54
Total	8,685,528.28	679,629.44			1,057,010.70
SERVICE PUBLICATIONS					
Direct Labor Hours	168,433.5	13,853.7	3,073.9	252.8	580.1
Direct Labor Costs	417,394.35	34,331.12	6,704.97	551.49	1,275.27
Overtime Premium	23,659.27	1,946.00			
Overhead	428,199.48	35,219.88	1,913.10	157.35	361.02
Subcontract Costs					
Material & Other Costs	590,724.30	48,587.70	1,392.54	114.54	
Travel & Per Diem	3,520.44	289.56			
Total	1,463,497.84	120,374.26	10,010.61	823.38	1,636.29
EXPERIMENTAL FACTORY					
Direct Labor Hours	43,843.7	3,606.0			
Direct Labor Costs	104,417.86	8,588.49			
Overtime Premium	4,564.55	375.43			
Overhead	106,614.48	8,768.36			
Subcontract Costs	5,302.94	436.17			
Material & Other Costs	52,412.36	4,310.97			
Travel & Per Diem					
Total	273,312.19	22,479.42			
WIND TUNNEL					
Occupancy Hours					
Direct Labor Hours	540.6	44.5			
Direct Labor Costs	1,426.54	117.33			
Overtime Premium	70.70	5.81			
Overhead					
Subcontract Costs					
Material & Other Costs	47.05	3.87			
Total	1,544.29	127.01			

ATEMENT OF ACCUMULATED COSTS

CONTRACT AF 33(600)-31174

31 December 1957

Page 1 of 6

Ground Support Equipment F-102A	Ground Support Equipment TF-102A	M.T.U. F-102A	Contract Project Costs	562 F-102A	63 TF-102A
116,412.2	9,575.0	10,371.8	1,128,599.1	1,043,319.2	85,279.9
332,004.83	27,307.76	30,711.06	3,472,855.80	3,210,388.29	262,467.51
9,198.64	756.60	1,423.03	148,925.05	137,675.46	11,249.59
323,594.57	26,616.00	27,685.90	3,061,121.01	2,829,857.41	231,263.60
174,875.94	14,383.74	260,190.58	527,435.04	487,349.99	40,085.05
206,933.18	17,020.46	10,497.96	499,986.70	465,652.63	34,334.07
10,403.54	855.71	1,243.49	179,131.13	165,841.78	13,289.35
1,057,010.70	86,940.27	331,752.02	7,889,454.73	7,296,765.56	592,689.17
580.1	47.7		178,332.7	164,779.5	13,553.2
1,275.27	104.89		443,088.85	409,414.11	33,674.74
			25,605.27	23,659.27	1,946.00
361.02	29.70		460,958.19	425,925.36	35,032.83
			637,804.92	589,331.76	48,473.16
			3,810.00	3,520.44	289.56
1,636.29	134.59		1,571,267.23	1,451,850.94	119,416.29
			47,449.7	43,843.7	3,606.0
			113,006.35	104,417.86	8,588.49
			4,939.98	4,564.55	375.43
			115,382.84	106,614.48	8,768.36
			5,739.11	5,302.94	436.17
			56,723.33	52,412.36	4,310.97
			295,791.61	273,312.19	22,479.42
			585.1	540.6	44.5
			1,543.87	1,426.54	117.33
			76.51	70.70	5.81
			50.92	47.05	3.87
			1,671.30	1,544.29	127.01

STATEMENT OF ACCU

CONTRACT AF 33

31 Dece

	Total Contract Costs		Spares		Grou Support Equ
	F-102A	TF-102A	F-102A	TF-102A	F-102A
EDWARDS					
Direct Labor Hours	8,448.5	430.8			
Direct Labor Costs	23,477.17	1,188.65			
Overtime Premium	99.36	7.65			
Overhead	28,308.93	1,410.72			
Other Costs	1,462.26	106.73			
Travel & Per Diem	99.21	8.16			
Total	53,446.93	2,721.91			
HOLLOMAN					
Direct Labor Hours	13,633.1	275.1			
Direct Labor Costs	36,744.11	732.19			
Overtime Premium	1,512.71	11.00			
Overhead	50,882.19	988.64			
Other Costs	299.80				
Travel & Per Diem	21,649.05				
Total	111,087.86	1,731.83			
FIELD SERVICE					
Direct Labor Hours	41,941.1	3,426.6			
Direct Labor Costs	130,470.97	10,668.72			
Overtime Premium	2,233.57	180.16			
Overhead	26,102.93	2,132.66			
Other Costs					
Travel & Per Diem	120,352.04	9,754.22			
Total	279,159.51	22,735.76			
TOTAL ENGINEERING	10,867,576.90	849,799.63	10,010.61	823.38	1,058,646.99

STATEMENT OF ACCUMULATED COSTS

CONTRACT AF 33(600)-31174

31 December 1957

Ground Support Equipment F-102A	Ground Support Equipment TF-102A	M.T.U. F-102A	Contract Project Costs	562 F-102A	63 TF-102A
			8879 3	8448 5	430 8
			24665 82	23477 17	1188 65
			107 01	99 36	7 65
			29719 65	28308 93	1410 72
			1568 99	1462 26	106 73
			107 37	99 21	8 16
			56168 84	53446 93	2721 91
			13908 2	13633 1	275 1
			37476 30	36744 11	732 19
			1523 71	1512 71	11 00
			51870 83	50882 19	988 64
			299 80	299 80	
			21649 05	21649 05	
			112849 69	111087 86	1731 83
			45367 7	41941 1	3426 6
			141,139 69	130470 97	10668 72
			2,413 73	2233 57	180 16
			28,235 59	26102 93	2132 66
			130,106 26	120352 04	9754 22
			301895 27	279159 51	22735 76
8 -1058646 99	87074 86	331752 02	10299068 67	9467167 28	761901 39

STATEMENT OF ACCUMU
CONTRACT AF 33(6
31 December

	Total Contract Costs		Spares		Ground Support
	F-102A	TF-102A	F-102A	TF-102A	F-102A
TOOLING					
TOOL ENGINEERING					
Direct Labor Hours	523,414.1	49,162.9	3,858.5	317.4	3,090.4
Direct Labor Costs	1,348,644.51	130,835.19	11,401.37	937.77	7,544.53
Overtime Premium	48,239.67	3,711.47	12.75	1.05	94.33
Overhead	981,521.58	92,430.85	7,094.58	583.54	7,612.27
Subcontract Costs					
Travel & Per Diem					
Total	2,378,405.76	226,977.51	18,508.70	1,522.36	15,251.13
TOOL MANUFACTURING					
Direct Labor Hours	943,433.7	125,747.3	1,662.6	136.8	1,940.8
Direct Labor Costs	2,189,566.95	284,208.63	4,020.39	330.68	4,753.50
Overtime Premium	116,876.81	11,744.00			
Overhead	2,261,549.11	306,051.91	4,163.39	342.46	4,862.80
Raw Mat'l & Pur. Parts	293,193.14	39,484.50	271.28	22.32	4,489.14
Subcontract Costs	495,227.84	22,583.44			
Other Costs	654,237.68	58,674.91	1,883.38	154.91	29,556.78
Travel & Per Diem	11,781.93	969.07			
Total	6,022,433.46	723,716.46	10,338.44	850.37	43,662.22
PLANT ENGINEERING					
Direct Labor Hours	240,355.1	18,847.6			
Direct Labor Costs	570,539.20	44,692.77			
Overtime Premium	13,845.43	1,069.26			
Overhead	599,650.91	47,047.77			
Material & Other Costs	744,958.11	60,172.61			
Sound Suppression Equip	671,339.30	55,218.38			
MG-3 Test Equipment	171,203.22	14,081.65			
Total	2,771,536.17	222,282.44			
TOTAL TOOLING	11,172,375.39	1,172,976.41	28,847.14	2,372.73	58,913.35

EMENT OF ACCUMULATED COSTS
ONTRACT AF 33(600)-31174

31 December 1957

Ground Support Equipment F-102A	Ground Support Equipment TF-102A	M.T.U. F-102A	Contract Project Costs	562 F-102A	63 TF-102A
3 090 4	254 2		565 056 5	516 465 2	48 591 3
7 544 53	620 55		1 458 975 48	1 329 698 61	129 276 87
94 33	7 76		51 835 25	48 132 59	3 702 66
7 612 27	626 12		1 058 035 92	966 814 73	91 221 19
15 251 13	1 254 43		2 568 846 65	2 344 645 93	224 200 72
1 940 8	159 7	15	1 065 279 6	939 828 8	125 450 8
4 753 50	390 97	304	2 464 277 00	2 180 790 02	283 486 98
			128 620 81	116 876 81	11 744 00
4 862 80	414 18	346	2 557 814 73	2 252 519 46	305 295 27
4 489 14	369 24		327 525 66	288 432 72	39 092 94
			517 811 28	495 227 84	22 583 44
29 556 78	2 431 07		678 886 45	622 797 52	56 088 93
			12 751 00	11 781 93	969 07
43 662 22	3 605 46	650	6 687 686 93	5 968 426 30	719 260 63
			259 202 7	240 355 1	18 847 6
			615 231 97	570 539 20	44 692 77
			14 914 69	13 845 43	1 069 26
			646 698 68	599 650 91	47 047 77
			805 130 72	744 958 11	60 172 61
			726 557 68	671 339 30	55 218 38
			185 284 87	171 203 22	14 081 65
			2 993 818 61	2 771 536 17	222 282 44
58 913 35	4 859 89	650	12 250 352 19	11 084 608 40	1 165 743 79

STATEMENT OF ACCUMULA

CONTRACT AF 33(60

31 December 1

	Total Contract Costs F-102A	Total Contract Costs TF-102A	Spares F-102A	Spares TF-102A	Grou Support F-102A
MANUFACTURING					
FACTORY					
Direct Labor Hours	12,651,298.7	902,112.4	177,455.1	14,596.1	34,658.1
Direct Labor Costs	25,710,081.84	1,904,157.71	375,141.87	30,855.83	84,005.08
Overtime Premium	989,651.15	20,409.52	7,600.86	625.18	2,121.69
Overhead	31,024,707.86	2,248,099.96	438,726.48	36,085.71	87,027.39
Sub Total	57,724,440.85	4,172,667.19	821,469.21	67,566.72	173,154.16
MATERIAL & OTHER COSTS					
Raw Mat'l & Pur. Parts	79,382,904.14	6,536,566.80	13,669,669.86	1,124,345.12	5,546,171.50
Subcontract	76,638,088.80	6,301,405.46	1,970,356.09	162,061.35	13,071,246.82
Excess Usage	508,397.93	41,876.28			
Surplus & Obsolete	4,162,512.88	342,371.21			
Rework	784,064.96	64,490.20			
Vendor Program Costs	2,864,494.82	235,607.79			
Cancellation Costs	1,258,787.45	303,208.25		201,157.69	1,754.02
Sub Total	165,599,250.98	13,825,465.99	15,640,025.95	1,487,564.16	18,619,172.34
Other Costs	5,757,080.16	474,445.93	15,259.79	1,255.16	16,264.97
Travel & Per Diem	289,951.82	10,761.22	287.11	23.61	2,254.73
Total Factory	229,370,723.81	18,483,340.33	16,477,042.26	1,556,409.65	18,810,846.20
Fort Worth Costs	36,479,877.07	19,382,631.58	697,689.10	703,460.46	380.97
Pomona Costs	1,583,050.00	130,156.81	81,863.66	6,733.38	
SHIPPING					
Direct Labor Hours	103,753.5	8,555.4	68,265.6	5,615.0	381.2
Direct Labor Costs	201,183.21	16,588.05	132,733.32	10,917.47	674.51
Overtime Premium	2,682.68	220.67	1,538.11	126.52	19.15
Overhead	256,938.68	21,187.50	169,870.72	13,972.05	896.50
Subcontract Costs	177,794.67	14,623.80	3,973.22	326.80	173,744.32
Material & Other Costs	89,890.52	7,393.60	64,617.32	5,314.85	666.91
Total Shipping	728,489.76	60,013.62	372,732.69	30,657.69	176,001.39

TEMENT OF ACCUMULATED COSTS
CONTRACT AF 33(600)-31174
31 December 1957

	Ground Support Equipment F-102A	Ground Support Equipment TF-102A	M.T.U. F-102A	Contract Project Costs	562 F-102A	63 TF-102A
1	34,658.1	2,850.6	2,154.0	13,321,697.2	12,437,031.5	884,665.7
83	84,005.08	6,909.50	4,506.46	27,112,820.81	25,246,428.43	1,866,392.38
8	2,121.69	174.51	132.73	999,405.70	979,795.87	19,609.83
71	87,027.39	7,158.10	5,104.89	32,698,705.25	30,493,849.10	2,204,856.15
72	173,154.16	14,242.11	9,744.08	60,810,931.76	56,720,073.40	4,090,858.36
2	5,546,171.50	456,178.60	44,985.40	65,078,120.46	60,122,077.38	4,956,043.08
35	13,071,246.82	1,075,124.19	9,846.63	66,650,859.18	61,586,639.26	5,064,219.92
				550,214.21	508,397.93	41,816.28
				4,504,884.09	4,162,512.88	342,371.21
				848,555.16	784,064.96	64,490.20
				3,100,102.61	2,864,494.82	235,607.79
59	1,754.02			1,359,083.99	1,257,033.43	102,050.56
16	18,619,172.34	1,531,302.79	54,832.03	142,091,819.70	131,285,220.66	10,806,599.04
16	16,264.97	1,336.21	6,473.86	6,190,935.90	5,719,081.34	471,854.56
61	2,254.73	185.45		297,962.14	287,409.98	10,552.16
55	18,810,846.20	1,547,066.56	71,049.97	209,391,649.50	194,011,785.38	15,379,864.12
16	380.97		2,753.27	54,458,224.85	35,779,053.73	18,679,171.12
38			617.22	1,623,992.55	1,500,569.12	123,423.43
0	381.2	31.3		38,015.8	35,106.7	2,909.1
17	674.51	55.47		73,390.49	67,775.38	5,615.11
52	19.15	1.57		1,218.00	1,125.42	92.58
05	896.50	73.74		93,313.17	86,171.46	7,141.71
80	173,744.32	14,290.66		83.47	77.13	6.34
15	666.91	54.85		26,630.19	24,606.29	2,023.90
69	176,001.39	14,476.29		194,635.32	179,755.68	14,879.64

STATEMENT OF ACCUMUL
CONTRACT AF 33(60
31 December

	Total Contract Costs F-102A	Total Contract Costs TF-102A	Spares F-102A	Spares TF-102A	Groun Support F-102A
PALMDALE INSPECTION					
Direct Labor Hours	509,477.0	41,905.0			
Direct Labor Costs	1,265,990.11	104,129.05			
Overtime Premium	90,171.25	7,416.69			
Overhead	1,496,499.41	123,088.70			
Other Costs	97.39	8.01			
Total	2,852,758.16	234,642.45			
PALMDALE					
Direct Labor Hours	2,410,204.8	163,510.6			
Direct Labor Costs	5,757,000.39	393,434.34			
Overtime Premium	405,318.47	25,094.32			
Overhead	7,092,688.62	480,511.93			
Mat'l & Other Costs	265,866.99	23,897.80			
Travel & Per Diem	8,114.13	603.37			
Total	13,528,988.60	923,541.76			
PRODUCTION FLIGHT					
Direct Labor Hours	29,301.5	2,028.2			
Direct Labor Costs	131,281.45	8,644.10			
Overtime Premium	3,231.01	126.45			
Overhead	149,963.65	10,663.10			
Mat'l & Other Costs	40,807.95	306.55			
Gas & Oil	918,510.70	77,369.64			
Travel & Per Diem	20,874.41	1,611.39			
Total	1,264,669.17	98,721.23			
INSPECTION					
Direct Labor Hours	1,547,470.0	85,003.8	15,291.9	1,257.7	9,575.5
Direct Labor Costs	3,517,606.96	196,233.43	34,306.18	2,821.71	23,635.20
Overtime Premium	106,300.69	4,241.68	219.72	18.07	
Overhead	3,799,552.69	210,117.60	37,647.77	3,096.55	24,054.40
Sub-contract Costs					
Other Costs					
Travel & per Diem					
Total Inspection	7,423,460.34	410,592.71	72,173.67	5,936.33	47,689.60
TOTAL MANUFACTURING	293,232,016.91	39,723,640.49	17,701,501.38	2,303,197.51	19,034,918.16

TATEMENT OF ACCUMULATED COSTS
CONTRACT AF 33(600)-31174
31 December 1957

	Ground Support Equipment F-102A	Ground Support Equipment TF-102A	M.T.U. F-102A	Contract Project Costs	562 F-102A	63 TF-102A
				551 382 0	509 477 0	41 905 0
				1 370 119 16	1 265 990 11	104 129 05
				97 587 94	90 171 25	7 416 69
				1 619 588 11	1 496 499 41	123 088 70
				105 40	97 39	8 01
				3 087 400 61	2 852 758 16	234 642 45
				2 573 715 4	2 410 204 8	163 510 6
				6 150 434 73	5 757 000 39	393 434 34
				430 412 79	405 318 47	25 094 32
				7 573 200 55	7 092 688 42	480 511 93
				289 764 79	265 866 99	23 897 80
				8 717 50	8 114 13	603 37
				14 452 530 36	13 528 988 60	923 541 76
				31 329 7	29 301 5	2 028 2
				139 925 55	131 281 45	8 644 10
				3 357 46	3 231 01	126 45
				160 626 75	149 963 45	10 663 10
				41 114 50	40 807 95	306 55
				995 880 34	918 510 70	77 369 64
				22 485 80	20 874 41	1 611 39
				1 363 390 40	1 264 669 17	98 721 23
7	9 575 5	787 7	149 8	1 605 411 2	1 522 452 8	82 958 4
171	23 635 20	1 944 02	339 46	3 650 793 82	3 459 326 12	191 467 70
07			158 74	110 145 84	105 922 23	4 223 61
55	24 054 40	1 978 50	358 19	3 942 534 89	3 737 492 33	205 042 55
33	47 689 60	3 922 52	856 39	7 703 474 54	7 302 740 68	400 733 86
51	19 034 918 16	1 565 465 37	75 276 85	292 275 298 13	256 420 320 52	35 854 977 61

STATEMENT OF ACCUM
CONTRACT AF 33(
31 December

	Total Contract Costs		Spares		Ground Support E
	F-102A	TF-102A	F-102A	TF-102A	F-102A
Division Costs	315 271 969 20	41 746 416 53	17 740 359 13	2 306 393 62	20 152 478 50
San Diego G.O. Overhead	3 834 749 16	293 456 68	51 895 61	4 197 69	32 919 08
Fort Worth G.O. Overhead	722 147 85	379 256 74	8 029 22	6 496 56	13 84
Pomona G.O. Overhead	36 580 27	3 007 94	2 074 74	170 64	
Total Project Costs	319 865 446 48	42 422 137 89	17 802 358 70	2 317 258 51	20 185 411 42
TOTAL HOURS	20 405 652 1	1 513 364 8	269 607 6	22 175 8	166 638 3

Cost Accounting Department
Works Accounting Section
Plant II, Ext. 564
S.D.R. 93-6-16
28 January 1958

Distribution

[illegible]
Herbig, J. R.
[illegible]
Jodka, J. J.
Johnson, E. E.
Liddle, W. N.
Adams, R. P.
Brymer, A. O.

Mc Manus, R. H.
Moseley, M. F.
[illegible]
Osborn, P. G.
Polsley, C.
[illegible]
Bolick, R. L.

STATEMENT OF ACCUMULATED COSTS
CONTRACT AF 33(600)-31174
31 December 1957

	Ground Support Equipment F-102A	Ground Support Equipment TF-102A	M.T.U. F-102A	Contract Project Costs	562 F-102A	63 TF-102A
3 62	20 152 471 50	1 657 400 12	407 035 37	314 754 718 99	271 972 096 20	37 782 622 79
7 69	32 919 08	2 707 20	2 159 39	4 034 326 87	3 747 775 08	286 551 79
6 56	13 84		47 31	1 086 817 66	714 057 48	372 760 18
0 64			9 41	37 333 42	34 496 12	2 837 30
8 51	20 185 411 42	1 660 107 32	409 251 48	319 913 196 94	281 468 424 88	38 444 772 06
5 8	166 638 3	13 706 2	12 677 1	21 434 211 9	19 956 729 1	1 477 482 8

tion

Mc Manus, R. H.
Moseley, M. F.
~~[illegible]~~
Osborn, P. G.
Polsley, C.
~~[illegible]~~
Bolick, R. L.

Fort Worth Distribution
33(600) 31174
December 1957

Totals from Ft. Worth Cost Ledger for November 1957

Hours	6,211,950.0
Amount	53,896,202.45

Spares

F

W.O.	Hrs.	Amt.
37-42-XXX	425720	62005979
Alloc (see below)	13307	796165
	439027	62802144

TF

37-41-XXX	337550	62517952
Alloc (see below)	13413	802560
	350963	63320512

*	December 681 Balance	5586250865
See Below {	Less "F" Spares	69768910
	Less "TF" Spares	70346046
	Less M.T.H. F	275327
	Less G.H.E. F	38097
	Project Costs	5445822485

Total	Project F-65.7%	TF-34.3%
5445822485	3577905373	1867917112

Unidentified to Various

37-42-001	24640	1405772
37-42-002	1360	156251
37-42-003	720	36702
	26720	1598725

additional Spare costs from J 12-57 By Bill $139,923.00 Split Between F & TF By % of actual 37 worth Spares dollars.

Split to F & TF by actual % of costs
F = 49.8% TF = 50.2%

TOTAL	F 49.79	TF 50.21
126122656	62802144	63320512
13992300	6966766	7025534
TOTAL SPARES	69768910	70346046

M.T.H.

W.O.	Hrs.	Amt.
37-01-001	2530	275327

G.H.E.

W.O.	Hrs.	Amt.
37-43-XXX	740	38097

* This figure is S/A 681 Plus $589,640.91 from 992 Element

CHANGES TO MASTER DECK
CONTRACT AF 33(600)-31174
DECEMBER, 1957

WORK ORDER		SUB-ACCOUNT		PERCENTAGE		GROUP CODE		DISTR. CODE	
				F	TF	F	TF	F	TF
18458	421			92.4%	7.6%	5	5	1	4
18459	421			92.4%	7.6%	5	5	1	4
18771	679				100%		56		4

Changes to Master Deck
Contract AF 33(600) 1176
December, 1957

WORK ORDER	SUB-ACCOUNT	PERCENTAGE F	PERCENTAGE TF	GROUP CODE F	GROUP CODE TF	DISTR CODE F	DISTR CODE TF
18488	414, 424, 444	92.4	7.6	6	6	1	4

This change was made per Dick Adams - Thinking was changed as to Responsibility - Tool Eng. Assist has no target for Preservation of Tooling - only target for Preservation of Mfg Aids.

Pomona Distribution
Contract AF 33(600) 31174
December 1957

From November 1957 Pomona Cost Ledger

Spares	88597 04
MTU	617 22

Pomona December Balance *	1713206 81
Less Spares	88597 04
Less MTU	617 22
Total Project	1623992 55

	Total	F-92.4%	TF-7.6%
Project	1623992 55	1500569 12	123423 43
Spares	88597 04	81863 66	6733 38
MTU	617 22	617 22	
Total	1713206 81	1583050 00	130156 81

* This figure is Dec. 681 Balance Plus $12,135.38 from 992 Element.

CONTRACT AF 33(600)-33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

AS OF APRIL 30, 1959 BASED ON MARCH BUDGET REPORT

		Airplanes
I Calculation of Incentive Profit:		
Contract Target Cost		68 749 940 00
Total Indicated Costs-Proj. Target Report		70 336 855 00
Less: Engineering Changes		5 188 323 00
Total Indicated Allowable Costs of Orig. Task		65 148 532 00
Indicated Underrun or (Overrun) 191,181.00 x .08 = 15,294.48		3 601 408 00
Incentive Profit or (Loss) Sharing (20%) 720,281.60 - 15,294.48		704 987 12
II Sales, Cost of Sales and Profit		
Profit: (Convair)		
Contract Target Profit (8%)		5 499 995 20
Total Engineering Changes	5 188 323 00	
Less: Personal Property taxes	183 654 00	
Engineering Changes (8%)	5 004 669 00	400 373 52
Incentive Profit or Loss		704 987 12
Total Convair Profit		6 605 355 84
Profit: (San Diego Division)		
Convair Profit		6 605 355 84
Plus: San Diego G.O. Overhead		969 244 00
Fort Worth G.O. Overhead		162 170 60
Pomona G.O. Overhead		6 766 40
Total San Diego Profit		7 743 536 84
Cost of Sales, (San Diego Division)		
Convair Cost of Sales		70 336 855 00
Less: San Diego G.O. Overhead		969 244 00
Fort Worth G.O. Overhead		162 170 60
Pomona G.O. Overhead		6 766 40
		69 198 674 00
Sales:		
Total indicated Costs		70 336 855 00
Convair Profit		6 605 355 84
		76 942 210 84
LESS MISC SALES AT No Profit		39 952 90
		76 902 257 94
UNIT SELLING PRICE		549 301 85

COS. 8

CONTRACT AF 33(600)-33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

AS OF APRIL 30, 1959 BASED ON MARCH BUDGET Page 2 of 2

	Airplanes
III: Rate of Profit to Sales	
Convair	8.59
San Diego	10.07
Rate of Profit to Cost (Convair)	

CONTRACT AF 33(60

SALES, COST OF SALES AND PROFIT O

AS OF APRIL 30, 1959 BASE

	MONTH OF DELIVERIES			F-102A & TF-102A BOOKED THROUGH		
	UNITS	AVE. UNIT	TOTAL	UNITS	AVE. UNIT	
Sales						
F-102A				140	556 637 98	77
TF-102A						
Total						
Cost of Sales						
F-102A						70
TF-102A						
Total						
Profit						
F-102A						6
TF-102A						
Total						
Per Cent to Sales					8.98	

Cost Accounting Department
Works Accounting Section
Plant II, Ext. 564

AF 33(600)- 33695

PROFIT ON MODELS F-102A & TF-102A

BASED ON MARCH BUDGET

-102A GH T	TOTAL	ADJUSTMENT TO	BOOKED THROUGH UNITS	AVE. UNIT	TOTAL	NET BOOKED AMOUNT
7 98	77 932 117 20		140	549 301 85	76 902 259 00	<1 029 858 20>
	70 933 813 08				69 158 201 52	<1 775 611 56>
	6 998 304 12				7 744 057 48	745 753 36
98						

33695

	Sales	Profit,
Airplanes Normal Adj.	<1,145,441>	741,793
Excluding Est. Oscillation	<170,643>	<170,643>
Net Adj.	<1,316084>	571,150

~~New Sales Co. Total~~	77,932,177.
Plus Misc	35,953
Less Adj.	1,316,084
	76,652,046 ✓

New Profit Est Airplanes	6,998,304
Plus Adj.	571,150
	7,569,354

New Profit rate 9.875%

CONTRACT AF 33(600)-33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

AS OF JANUARY 31, 1959 BASED ON DECEMBER 1958 BUDGET

		Airplanes
I: Calculation of Incentive Profit:		
Contract Target Cost		68,749,940.00
Total Indicated Costs-Proj. Target Report		70,221,110.00
Less: Engineering Changes		5,053,394.00
Total Indicated Allowable Costs of Orig. Task		65,167,716.00
Indicated Underrun or (Overrun) 56,252.00 x 8% = 4,500.16		3,582,224.00
Incentive Profit or (Loss) Sharing (20%) 3,582,224 - 4,500.16		711,944.64
II: Sales, Cost of Sales and Profit		
Profit: (Convair)		
Contract Target Profit (8%)		5,499,995.20
Total Engineering Changes	5,053,394.00	
Less: Personal Property taxes	183,654.00	
Engineering Changes (8%)	4,869,740.00	389,579.20
Incentive Profit or Loss		711,944.64
Total Convair Profit		6,601,519.04
Profit: (San Diego Division)		
Convair Profit		6,601,519.04
Plus: San Diego G.O. Overhead		968,634.00
Fort Worth G.O. Overhead		163,677.00
Pomona G.O. Overhead		6,757.39
Total San Diego Profit		7,740,587.43
Cost of Sales, (San Diego Division)		
Convair Cost of Sales		70,221,110.00
Less: San Diego G.O. Overhead		968,634.00
Fort Worth G.O. Overhead		163,677.00
Pomona G.O. Overhead		6,757.39
		69,082,041.61
Sales:		
Total Indicated Costs		70,221,110.00
Convair Profit		6,601,519.04
Total Sales		76,822,629.04
Less Miscellaneous Sales at no Profit		35,952.90
		76,786,676.14
Unit Selling Price		548,476.26

CONTRACT AF 33(600)- 33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

AS OF JANUARY 31, 1959 BASED ON DECEMBER 1958 BUDGET

	Airplanes	
III: Rate of Profit to Sales		
Convair	8.59	
San Diego	~~10.08~~	10.08
Rate of Profit to Cost		
Convair	9.40	
San Diego		

CONTRACT AF 33

SALES, COST OF SALES AND PROFIT

AS OF JANUARY 31, 1958 - BASE

	MONTH OF DELIVERIES	JANUARY		F-102A & TF-102A BOOKED THROUGH	
	UNITS	AVE. UNIT	TOTAL	UNITS	AVE. UNIT
Sales					
F-102A				140	556 657 98
TF-102A					
Total					
Cost of Sales					
F-102A					
TF-102A					
Total					
Profit					
F-102A					
TF-102A					
Total					
Per Cent to Sales					

Cost Accounting Department
Works Accounting Section
Plant II, Ext. 564

AF 33(600)- 33695

PROFIT ON MODELS F-102A & TF-102A

BASED ON DECEMBER 1959 BUDGET

-102A UGH IT	DECEMBER TOTAL	ADJUSTMENT TO	BOOKED THROUGH JANUARY UNITS	 AVE. UNIT	 TOTAL	NET BOOKED AMOUNT	
7 98	77 932 117 20		140	548 476 26	76 786 676 40	<1 145 440 80>	
	70 933 813 08				69 046 579 42	<1 887 133 66>	
	6 998 304 12				7 740 096 98	741 792 86	
	8 98				10.08		

CONTRACT AF 33

SALES, COST OF SALES AND PROFI

AS OF JANUARY 31, 1959

	MONTH OF JANUARY DELIVERIES			F-102A & TF-102A BOOKED THROUGH	
	UNITS	AVE. UNIT	TOTAL	UNITS	AVE. UNIT
Sales					
F-102A				140	556657 98
TF-102A					
Total					
Cost of Sales					
F-102A					
TF-102A					
Total					
Profit					
F-102A					
TF-102A					
Total					
Per Cent to Sales					

Cost Accounting Department
Works Accounting Section
Plant II, Ext. 564

CT AF 33(600)-33695

ND PROFIT ON MODELS F-102A & TF-102A

59 BASED ON DECEMBER BUDGET

TF-102A ROUGH UNIT	DECEMBER TOTAL	ADJUSTMENT TO DECEMBER	BOOKED THROUGH JANUARY			NET BOOKED AMOUNT
			UNITS	AVE. UNIT	TOTAL	
657 98	77 932 117 20		140 140	548 733 06 548 476 26	76 822 698 40 76 786 676 40	<1 109 488 80> 1 145 440 80
	70 933 813 08				69 078 907 46 69 046 579 42	<1 854 905 62>
	6 998 304 12				7 743 720 94 7 740 096 98	745 416 82 741 792 86
	8.98				10.08	

CONTRACT AF 33(600)-33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

AS OF DECEMBER 31, 1958 BASED ON NOVEMBER BUDGET

			Airplanes
I:	Calculation of Incentive Profit:		
	Contract Target Cost		68,749,940.00
	Total Indicated Costs-Proj. Target Report		70,520,392.00
	Less: Engineering Changes		4,998,770.00
	Total Indicated Allowable Costs of Orig. Task		65,521,622.00
	Indicated Underrun or (Overrun) 39,500.00 X 8% = 3,160.00		3,228,318.00
	Incentive Profit or (Loss) Sharing (20%) 3,228,318.00 - 3,160.00 ÷ 195.00		642,308.60
II	Sales, Cost of Sales and Profit		
	Profit: (Convair)		
	Contract Target Profit (8%)		5,499,995.20
	Total Engineering Changes	4,998,770.00	
	Less: Personal Property taxes	183,654.00	
	Engineering Changes (8%)	4,815,116.00	385,209.28
	Incentive Profit or Loss		642,308.60
	Total Convair Profit		6,527,513.08
	Profit: (San Diego Division)		
	Convair Profit		6,527,513.08
	Plus: San Diego G.O. Overhead		987,040.00
	Fort Worth G.O. Overhead		163,677.00
	Pomona G.O. Overhead		6,406.32
	Total San Diego Profit		7,684,636.40
	Cost of Sales, (San Diego Division)		
	Convair Cost of Sales		70,520,392.00
	Less: San Diego G.O. Overhead		987,040.00
	Fort Worth G.O. Overhead		163,677.00
	Pomona G.O. Overhead		6,406.32
			69,363,268.68
	Sales:		
	Total indicated Costs		70,520,392.00
	Convair Profit		6,527,513.08
			77,047,905.08
	UNIT PRICE		550,340.83

CONTRACT AF 33(600)-33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

AS OF DECEMBER 31, 1958 BASED ON NOVEMBER BUDGET Page 2 of 2

	Airplanes
III: Rate of Profit to Sales	
Convair	8.47
San Diego	9.97

CONTRACT AF 33(600)-

SALES, COST OF SALES AND PROFIT ON

AS OF DECEMBER 31 1958 BASED

	MONTH OF DELIVERIES			F-102A & TF-102A BOOKED THROUGH		No
	UNITS	AVE. UNIT	TOTAL	UNITS	AVE. UNIT	
Sales						
F-102A				140	556 657 98	779.
TF-102A						
Total						
Cost of Sales						
F-102A						70
TF-102A						
Total						
Profit						
F-102A						6
TF-102A						
Total						
Per Cent to Sales						

Cost Accounting Department
Works Accounting Section
Plant II, Ext. 564

T AF 33(600)- 33695

D PROFIT ON MODELS F-102A & TF-102A

BASED ON NOVEMBER BUDGET

F-102A UGH IT	NOVEMBER TOTAL	ADJUSTMENT TO	BOOKED THROUGH UNITS	 AVE. UNIT	DECEMBER TOTAL	NET BOOKED AMOUNT	
57 98	77 932 117 20		140	550 342 18	77 047 905 08	< 884 212 12 >	
	70 933 813 08				69 366 228 94	<1 567 584 14 >	
	6 998 304 12				7 681 676 14	683 372 02	
	8.98				9.97		

CONTRACT AF 33(600)-33696

CALCULATION OF SALES, COST OF SALES AND PROFIT

AS OF NOVEMBER 30, 1958 BASED ON OCTOBER BUDGET

			Airplanes
I:	Calculation of Incentive Profit:		
	Contract Target Cost		68 749 940 00
	Total Indicated Costs-Proj. Target Report		70 521 339 00
	Less: Engineering Changes		4 998 770 00
	Total Indicated Allowable Costs of Orig. Task		65 522 569 00
	Indicated Underrun or (Overrun) 39,500.00 x 8% = 3,160.00		3 227 371 00
	Incentive Profit or (Loss) Sharing (20%) 3,227,371.00 - 3,160.00 x 20% 795.00		642 119 20
II:	Sales, Cost of Sales and Profit		
	Profit: (Convair)		
	Contract Target Profit (8%)		5 499 995 20
	Total Engineering Changes	4 998 770 00	
	Less: Personal Property taxes	183 654 00	
	Engineering Changes (8%)	4 815 116 00	385 209 28
	Incentive Profit or Loss		642 119 20
	Total Convair Profit		6 527 323 68
	Profit: (San Diego Division)		
	Convair Profit		6 527 323 68
	Plus: San Diego G.O. Overhead		988 397 00
	Fort Worth G.O. Overhead		163 677 00
	Pomona G.O. Overhead		6 669 64
	Total San Diego Profit		7 686 067 32
	Cost of Sales, (San Diego Division)		
	Convair Cost of Sales		70 521 339 00
	Less: San Diego G.O. Overhead		988 397 00
	Fort Worth G.O. Overhead		163 677 00
	Pomona G.O. Overhead		6 669 64
			69 362 595 36
	Sales:		
	Total indicated Costs		70 521 339 00
	Convair Profit		6 527 323 68
			77 048 662 68
	UNIT SELLING PRICE		550 347 59

CONTRACT AF 33(600)- 33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

AS OF NOVEMBER 30, 1958 BASED OCTOBER BUDGET Page 2 of 2

	Airplanes
III: Rate of Profit to Sales	
Convair	8.47
San Diego	9.96
COST	
CONVAIR	9.26

3

CONTRACT AF 33(600)

SALES, COST OF SALES AND PROFIT ON

AS OF NOVEMBER 30, 1958 BASE

	MONTH OF NOVEMBER			F-102A & TF-102A		
		DELIVERIES		BOOKED THROUGH		OC
	UNITS	AVE. UNIT	TOTAL	UNITS	AVE. UNIT	
Sales						
F-102A				140	556 657 98	77 9
TF-102A						
Total						
Cost of Sales						
F-102A						70 9
TF-102A						
Total						
Profit						
F-102A						6 9
TF-102A						
Total						
Per Cent to Sales						

Cost Accounting Department
Works Accounting Section
Plant II, Ext. 564

ACT AF33(600)- 33695

AND PROFIT ON MODELS F-102A & TF-102A

58 BASED ON OCTOBER BUDGET

TF-102A ROUGH UNIT	OCTOBER TOTAL	ADJUSTMENT TO OCTOBER	BOOKED THROUGH NOVEMBER UNITS	AVE. UNIT	TOTAL	NET BOOKED AMOUNT
657 98	77 932 117 90		140	550 347 59	77 048 662 60	<883 454 60>
	70 933 813 78				69 374 615 81	<1 559 197 97>
	6 998 304 12				7 674 046 79	675 742 67
	8.98				9.96	

CONTRACT AF 33(600)-33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

AS OF NOVEMBER 30, 1958 BASED ON OCTOBER BUDGET

			Airplanes
I:	Calculation of Incentive Profit:		
	Contract Target Cost		68 749 940 00
	Total Indicated Costs-Proj. Target Report		70 521 339 00
	Less: Engineering Changes		4 998 770 00
	Total Indicated Allowable Costs of Orig. Task		65 522 569 00
	Indicated Underrun or (Overrun) 39,500.00 x 8% = 3,160.00		3 227 371 00
	Incentive Profit or (Loss) Sharing (20%) 3,221,371.00 - 3,160.00 x 20% 195.00		642 119 20
I	Sales, Cost of Sales and Profit		
	Profit: (Convair)		
	Contract Target Profit (8%)		5 499 995 20
	Total Engineering Changes	4 998 770 00	
	Less: Personal Property taxes	183 654 00	
	Engineering Changes (8%)	4 815 116 00	385 909 98
	Incentive Profit or Loss		642 119 20
	Total Convair Profit		6 527 323 68
	Profit: (San Diego Division)		
	Convair Profit		6 527 323 68
	Plus: San Diego G.O. Overhead		988 397 00
	Fort Worth G.O. Overhead		163 677 00
	Pomona G.O. Overhead		6 669 64
	Total San Diego Profit		7 686 067 32
	Cost of Sales, (San Diego Division)		
	Convair Cost of Sales		70 521 339 00
	Less: San Diego G.O. Overhead		988 397 00
	Fort Worth G.O. Overhead		163 677 00
	Pomona G.O. Overhead		6 669 64
			69 362 595 36
	Sales:		
	Total indicated Costs		70 521 339 00
	Convair Profit		6 527 393 68
			77 048 662 68
	UNIT SELLING PRICE		550 347 59

CONTRACT AF 33(600)- 33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

AS OF NOVEMBER 30, 1958 BASED OCTOBER BUDGET Page 2 of 2

	Airplanes
III: Rate of Profit to Sales	
Convair	8.47
San Diego	9.96
COST	
CONVAIR	9.26

CONTRACT AF 33(60

SALES, COST OF SALES AND PROFIT C

AS OF NOVEMBER 30, 19[illegible] BAS

	MONTH OF NOVEMBER DELIVERIES			F-102A & TF-102A BOOKED THROUGH	
	UNITS	AVE. UNIT	TOTAL	UNITS	AVE. UNIT
Sales					
F-102A				140	556,657 98
TF-102A					
Total					
Cost of Sales					
F-102A					
TF-102A					
Total					
Profit					
F-102A					
TF-102A					
Total					
Per Cent to Sales					

Cost Accounting Department
Works Accounting Section
Plant II, Ext. 564

AF 33(600)- 33695

PROFIT ON MODELS F-102A & TF-102A

BASED ON OCTOBER BUDGET

102A	OCTOBER TOTAL	ADJUSTMENT TO OCTOBER	BOOKED THROUGH NOVEMBER			NET BOOKED AMOUNT	
			UNITS	AVE. UNIT	TOTAL		
18	77 932 117 20		140	550 347 59	77 048 662 60	<883 454 60>	
	70 933 813 08				69 374 615 81	<1 559 197 27>	
	6 998 304 12				7 674 046 79	675 742 67	
	8.98				9.96		

CONTRACT AF 33(600)- 33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

AS OF OCTOBER 31, 1958 BASED ON SEPTEMBER BUDGET

		Airplanes
I: Calculation of Incentive Profit:		
Contract Target Cost		68 749 940 00
Total Indicated Costs-Proj. Target Report		70 466 730 00
Less: Engineering Changes		4 993 160 00
Total Indicated Allowable Costs of Orig. Task		65 473 570 00 ✓
Indicated Underrun or (Overrun) 39,500.00 x 8% = 3,160.00 ✓		3 276 370 00
Incentive Profit or (Loss) Sharing (20%) 3,276,370 x 20 - 3,160.00		652 114 00 ✓
II Sales, Cost of Sales and Profit		
Profit: (Convair)		
Contract Target Profit (8%)		5 499 995 20 ✓
Total Engineering Changes	4 993 160 00	
Less: Personal Property taxes	183 654 00	
Engineering Changes (8%)	4 809 506 00 ✓	384 760 48
Incentive Profit or Loss		652 114 00
Total Convair Profit		6 536 869 68 ✓
Profit: (San Diego Division)		
Convair Profit		6 536 869 68
Plus: San Diego G.O. Overhead		986 629 00
Fort Worth G.O. Overhead		161 633 00
Pomona G.O. Overhead		5 662 18
Total San Diego Profit		7 690 793 86 ✓
Cost of Sales, (San Diego Division)		
Convair Cost of Sales		70 466 730 00 ✓
Less: San Diego G.O. Overhead		986 629 00
Fort Worth G.O. Overhead		161 633 00
Pomona G.O. Overhead		5 662 18
		69 312 805 82 ✓
Sales:		
Total indicated Costs		70 466 730 00 ✓
Convair Profit		6 536 869 68 ✓
		77 003 599 68 ✓
UNIT SELLING PRICE		550 025 71

COST 4

CONTRACT AF 33(600)- 33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

AS OF OCTOBER 31, 1958 BASED ON SEPTEMBER BUDGET

						Airplanes	
III: Rate of Profit to Sales							
Convair						8.49 %	✓
San Diego						9.99 %	✓
Rate of Profit to Cost							
Convair						9.28 %	✓
San Diego							

CL 97 4 ACCTG

CONTRACT AF 33(600

SALES, COST OF SALES AND PROFIT ON

AS OF OCTOBER, 31 1958 BASED

	MONTH OF OCTOBER DELIVERIES UNITS	MONTH OF OCTOBER DELIVERIES AVE. UNIT	MONTH OF OCTOBER DELIVERIES TOTAL	F-102A & TF-102A BOOKED THROUGH UNITS	F-102A & TF-102A BOOKED THROUGH AVE. UNIT	SA
Sales						
F-102A	-0-	-0-	-0-	140	556 657 98	77
TF-102A	-0-	-0-	-0-			
Total						
Cost of Sales						
F-102A						70
TF-102A						
Total						
Profit						
F-102A						6
TF-102A						
Total						
Per Cent to Sales						

Cost Accounting Department
Works Accounting Section
Plant II, Ext. 564

CT AF 33(600)- 33695

ND PROFIT ON MODELS F-102A & TF-102A

BASED ON SEPTEMBER BUDGET

TF-102A OUGH NIT	SEPTEMBER TOTAL	ADJUSTMENT TO SEPTEMBER	UNITS	BOOKED THROUGH OCTOBER AVE. UNIT	TOTAL	NET BOOKED AMOUNT
57 98	77 932 117 20 ✓		140	550 025 71	77 003 599 40 ✓	<928 517 80> ✓
	70 933 813 08				69 310 939 82 ✓	<1 622 873 26>
	6 998 304 12 ✓				7 692 659 58 ✓	694 355 46 ✓
	8.98 ✓				9.98 ✓	

COST 4 ACCTS

CONTRACT AF 33(600)-_ 33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

AS OF AUGUST 31, 1958 BASED ON JULY BUDGET

		Airplanes
I: Calculation of Incentive Profit:		
Contract Target Cost		68 749 940 00
Total Indicated Costs-Proj. Target Report		70 397 101 00
Less: Engineering Changes		4 828 958 00
Total Indicated Allowable Costs of Orig. Task		65 568 143 00
Indicated Underrun or (Overrun) $3,950,00 x .8 = $3,160,00		3 181 797 00
Incentive Profit or (Loss) Sharing (20%) 3,181,797 00 x .20 - $3,160,00		633 199 40
II Sales, Cost of Sales and Profit		
Profit: (Convair)		
Contract Target Profit (8%)		5 499 995 20
Total Engineering Changes	4 828 958 00	
Less: Personal Property taxes	176 368 96	
Engineering Changes (8%)	4 652 589 04	372 207 12
Incentive Profit or Loss		633 199 40
Total Convair Profit		6 505 401 72
Profit: (San Diego Division)		
Convair Profit		6 505 401 72
Plus: San Diego G.O. Overhead		963 573 00
Fort Worth G.O. Overhead		163 377 00
Pomona G.O. Overhead		5 662 18
Total San Diego Profit		7 638 013 90
Cost of Sales, (San Diego Division)		
Convair Cost of Sales		70 397 101 00
Less: San Diego G.O. Overhead		963 573 00
Fort Worth G.O. Overhead		163 377 00
Pomona G.O. Overhead		5 662 18
		69 264 488 82
Sales:		
Total indicated Costs		70 397 101 00
Convair Profit		6 505 401 72
		76 902 502 72
		549 303 59

COST 3

CONTRACT AF 33(600)-33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

AS OF AUGUST 31, 1958 BASED ON JULY BUDGET

Page 2 of 2

	Airplanes
III: Rate of Profit to Sales	
Convair	8.46
San Diego	9.93
Rate of Profit to Cost (Convair)	9.24

Property tax	176,368.96
Prop. T. Rate	08
	14 109 52

Budget Profit	6,519,508.00
C of B Profit	6,525,401.72
	14,106.28

Budget Sales	76,916,609.00
C of S Sales	76,902,002.72
	14,106.28

CONTRAC

SALES, COST OF SALES AN

AS OF AUGUST 31, 1958

	MONTH OF AUGUST DELIVERIES			F-102A & T BOOKED THRO	
	UNITS	AVE. UNIT	TOTAL	UNITS	AVE. UN
Sales					
F-102A	10	549 303 59	5 493 035 90	125	556 6
TF-102A					
Total					
Cost of Sales					
F-102A			4 948 126 74		
TF-102A					
Total					
Profit					
F-102A			544 909 16		
TF-102A					
Total					
Per Cent to Sales			9 92		

Cost Accounting Department
Works Accounting Section
Plant II, Ext. 564

T AF 33(600)- 33695

D PROFIT ON MODELS F-102A & TF-102A

ASED ON JULY BUDGET REPORT

F-102A UGH IT	JULY TOTAL	ADJUSTMENT TO JULY	UNITS	BOOKED THROUGH AUGUST AVE. UNIT	TOTAL	NET BOOKED AMOUNT
5798	69 582 247 50	⟨919 298 75⟩	135	549 303 59	74 155 984 65	4 573 737 15
	63 333 761 67	⟨1 482 177 44⟩			66 799 710 97	3 465 949 30
	6 248 485 83	562 878 69			7 356 273 68	1 107 787 85
	8.98				9.92	

CONTRACT AF 33(600)-33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

AS OF JULY 31, 1958 BASED ON JUNE BUDGET

			Airplanes
I: Calculation of Incentive Profit:			
Contract Target Cost			68 749 940 00
Total Indicated Costs-Proj. Target Report			70 422 126 00
Less: Engineering Changes			4 784 856 00
Total Indicated Allowable Costs of Orig. Task			65 637 970 00
Indicated Underrun or (Overrun)	39,500.00 × 8% = 3,160.00		3 112 670 00
Incentive Profit or (Loss) Sharing (20%)	3,112,670 × 20% − 3,160.00		619 374 00
II Sales, Cost of Sales and Profit			
Profit: (Convair)			
Contract Target Profit (8%)			5 499 995 20
Total Engineering Changes		4 784 856 00	
Less: Personal Property taxes		176 368 96	
Engineering Changes (8%)		4 608 487 04	368 678 96
Incentive Profit or Loss			619 374 00
Total Convair Profit			6 488 048 16
Profit: (San Diego Division)			
Convair Profit			6 488 048 16
Plus: San Diego G.O. Overhead			971 063 00
Fort Worth G.O. Overhead			161 633 00
Pomona G.O. Overhead			5 662 18
Total San Diego Profit			7 626 406 34
Cost of Sales, (San Diego Division)			
Convair Cost of Sales			70 422 126 00
Less: San Diego G.O. Overhead			971 063 00
Fort Worth G.O. Overhead			161 633 00
Pomona G.O. Overhead			5 662 18
			69 283 767 82
Sales:			
Total indicated Costs			70 422 126 00
Convair Profit			6 488 048 16
			76 910 174 16

COST 3

3

CONTRACT AF 33(600)- 33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

AS OF JULY 31, 1958 BASED ON JUNE BUDGET Page 2 of 2

	Airplanes
III: Rate of Profit to Sales	
Convair	8.44
San Diego	9.92
Rate of Profit to Cost (Convair)	9.21

4

Property tax	176,368.96
Profit Rate	.08
unallowable profit	14,109.52

Budget Profit	6,502,155.00
C of S Profit	6,488,048.16
	14,106.84

Budget Sales	76,924,281.00
C of S Sales	76,910,174.16
	14,106.84

CONT

SALES, COST OF SALES

AS OF JULY 31, 1958

			MONTH OF	JULY		F-102A &
			DELIVERIES			BOOKED TH
		UNITS	AVE. UNIT	TOTAL	UNITS	AVE.
Sales						
F-102A					110	556
TF-102A						
Total						
Cost of Sales						
F-102A						
TF-102A						
Total						
Profit						
F-102A						
TF-102A						
Total						
Per Cent to Sales						

Cost Accounting Department
Works Accounting Section
Plant II, Ext. 564

AF 33(600)- 33695

PROFIT ON MODELS F-102A & TF-102A

BASED ON JUNE BUDGET

-102A GH T	JUNE TOTAL	ADJUSTMENT TO JUNE	BOOKED THROUGH JULY UNITS	 AVE. UNIT	 TOTAL	NET BOOKED AMOUNT	
7 98 [illegible]	61 232 377 80 [illegible]	⟨802 954 90⟩					
	55 733 710 27 [illegible]	⟨1 298 886 12⟩					
	5 498 667 53 [illegible]	495 931 22					
	8.98% [illegible]				9.92		

CONTRACT AF 33(600)-33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

AS OF JUNE 30 1958 BASED ON MAY BUDGET

	Airplanes
I: Calculation of Incentive Profit:	
Contract Target Cost	68 749 940 00
Total Indicated Costs-Proj. Target Report	70 544 189 00
Less: Engineering Changes	4 735 638 00
Total Indicated Allowable Costs of Orig. Task	65 808 551 00
Indicated Underrun or (Overrun)	2 941 389 00
Incentive Profit or (Loss) Sharing (20%)	588 277 80
II Sales, Cost of Sales and Profit	
Profit: (Convair)	
Contract Target Profit (8.0)%	5 499 995 20
Engineering Changes (8.0)%	378 851 04
Incentive Profit or (Loss)	588 277 80
Total Convair Profit	6 467 124 04
Profit: (San Diego Division)	
Convair Profit	6 467 124 04
Plus: San Diego G.O. Overhead	977 906 00
Fort Worth G.O. Overhead	164 530 00
Pomona G.O. Overhead	5 662 18
Total San Diego Profit	7 615 222 22
Cost of Sales: (Convair)	
Total Indicated Costs	70 544 189 00
Cost of Sales: (San Diego Division)	
Convair Cost of Sales	70 544 189 00
Less: San Diego G.O. Overhead	977 906 00
Fort Worth G.O. Overhead	164 530 00
Pomona G.O. Overhead	5 662 18
San Diego Cost of Sales	69 396 090 82
Sales:	
Total Indicated Costs	70 544 189 00
Convair Profit	6 467 124 04
Total Sales	77 011 313 04

CONTRACT AF 33(600)- 33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

AS OF JUNE 30, 1958 BASED ON MAY BUDGET Page 2 of 2

	Airplanes
III: Rate of Profit to Sales	
Convair	8.40
San Diego	9.89
Rate of Profit to Cost (Convair)	9.17

CONTRA

SALES, COST OF SALES A

AS OF JUNE 30, 1958

	MONTH OF DELIVERIES			F-102A & BOOKED THR	
	UNITS	AVE. UNIT	TOTAL	UNITS	AVE. U
Sales					
F-102A	21	550 080 81	11 551 697 01	89	556
TF-102A					
Total					
Cost of Sales					
F-102A			10 409 234 18		
TF-102A					
Total					
Profit					
F-102A			1 142 462 83		
TF-102A					
Total					
Per Cent to Sales			9.89		

Cost Accounting Department
Works Accounting Section
Plant II, Ext. 564

AF 33(600)-

PROFIT ON MODELS F-102A & TF-102A

BASED ON MAY BUDGET REPORT

-102A		ADJUSTMENT		BOOKED THROUGH		NET	
GH		TO				BOOKED	
T	TOTAL		UNITS	AVE. UNIT	TOTAL	AMOUNT	
7 98	49 542 560 22	⟨585 368 13⟩	110	550 080 81	60 508 889 10	10 966 328 88	
	45 093 638 31	⟨978 312 59⟩			54 524 559 97	9 430 921 66	
	4 448 921 91	392 944 39			5 984 329 13	1 535 407 22	
	8.98						

COST 8 ACCTG

CONTRA

SALES, COST OF SALES

AS OF JUNE 30 1958

	MONTH OF	JUNE		F-102A &	
	DELIVERIES			BOOKED THR	
	UNITS	AVE. UNIT	TOTAL	UNITS	AVE. U
Sales					
F-102A	21	550 080 81	11 551 697 01	89	556
TF-102A					
Total					
Cost of Sales					
F-102A					
TF-102A					
Total					
Profit			1 142 410 68		
F-102A					
TF-102A					
Total					
Per Cent to Sales			9.89		

Estimated

Cost Accounting Department
Works Accounting Section
Plant II, Ext. 564

AF 33(600)- 33695

PROFIT ON MODELS F-102A & TF-102A

ASED ON MAY BUDGET REPORT

-102A UGH CT	MAY TOTAL	ADJUSTMENT TO MAY	UNITS	BOOKED THROUGH AVE. UNIT	JUNE TOTAL	NET BOOKED AMOUNT
7.98	49 542 560 22	<585 368 13>	~~89~~ 110	~~550 080 61~~ 550 080 81	60 508 889 10	~~<585 368 13>~~ 10 966 328 88
	45 093 638 31	<978 312 52>			~~44 115 325 79~~ 54 524 559 97	~~<978 312 52>~~ 9 430 921 66
	4 448 921 91	392 944 39			~~4 841 866 30~~ 5 984 329 13	~~392 944 39~~ 1 535 407 22
	8.98			9.89	9.89	

COST 3 ACCTS

CONTRACT AF 33(600)- 33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

AS OF MAY 31 1958 BASED ON APRIL BUDGET Page 1 of 2

	Airplanes
I: Calculation of Incentive Profit:	
Contract Target Cost	68 749 940 00
Total Indicated Costs-Proj. Target Report	72 400 774 00
Less: Engineering Changes	4 735 638 00
Total Indicated Allowable Costs of Orig. Task	67 665 136 00
Indicated Underrun or (Overrun)	1 084 804 00
Incentive Profit or (Loss) Sharing (20%)	216 960 80
II: Sales, Cost of Sales and Profit	
Profit: (Convair)	
Contract Target Profit (8.0)%	5 499 995 20
Engineering Changes	378 851 04
Incentive Profit or (Loss)	216 960 80
Total Convair Profit	6 095 807 04
Profit: (San Diego Division)	
Convair Profit	6 095 807 04
Plus: San Diego G.O. Overhead	1 078 809 00
Fort Worth G.O. Overhead	161 011 00
Pomona G.O. Overhead	5 662 18
Total San Diego Profit	7 341 289 92
Cost of Sales: (Convair)	
Total Indicated Costs	72 400 774 00
Cost of Sales: (San Diego Division)	
Convair Cost of Sales	72 400 774 00
Less: San Diego G.O. Overhead	1 078 809 04
Fort Worth G.O. Overhead	161 011 00
Pomona G.O. Overhead	5 662 18
San Diego Cost of Sales	71 155 291 78
Sales:	
Total Indicated Costs	72 400 774 00
Convair Profit	6 095 807 04
Total Sales	78 496 581 04

CONTRACT AF 33(600)- 33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

AS OF MAY 31, 1958 BASED ON APRIL BUDGET Page 2 of 2

	Airplanes
III: Rate of Profit to Sales	
Convair	7.77
San Diego	9.35
Rate of Profit to Cost (Convair)	8.42

CONTRA

SALES, COST OF SALES A

AS OF MAY 31/9

		MONTH OF MAY DELIVERIES		F-102A & BOOKED THR	
	UNITS	AVE. UNIT	TOTAL	UNITS	AVE. U
Sales					
F-102A	26	560689 86	14 577 936 36	63	556
TF-102A					
Total					
Cost of Sales					
F-102A			13 214 899 31		
TF-102A					
Total					
Profit					
F-102A			1 363 037 05		
TF-102A					
Total					
Per Cent to Sales			9.35		

Cost Accounting Department
Works Accounting Section
Plant II, Ext. 564

T AF 33(600)- 33695

D PROFIT ON MODELS F-102A & TF-102A

58, BASED ON APRIL BUDGET

F-102A UGH IT	TOTAL	ADJUSTMENT TO	BOOKED THROUGH UNITS	AVE. UNIT	TOTAL	NET BOOKED AMOUNT
57 98	35 069 432 74	254 008 44	89	560 689 86	49 901 397 54	14 831 944 80
	31 920 215 88	100 501 68			45 233 616 87	13 315 400 99
	3 149 236 86	153 506 76			4 665 780 67	1 516 543 81
	8.98				9.35	

CONTRACT AF 33(600)- 33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

AS OF APRIL 30, 1958 BASED ON MARCH BUDGET Page 1 of 2

		Airplanes
I:	Calculation of Incentive Profit:	
	Contract Target Cost	68 749 940 00
	Total Indicated Costs-Proj. Target Report	72 158 022 00
	Less: Engineering Changes	4 335 548 00
	Total Indicated Allowable Costs of Orig. Task	67 822 474 00
	Indicated Underrun or (Overrun)	927 466 00
	Incentive Profit or (Loss) Sharing (%)	185 493 20
II	Sales, Cost of Sales and Profit	
	Profit: (Convair)	
	Contract Target Profit (8.0)%	5 499 995 20
	Engineering Changes	346 843 84
	Incentive Profit or (Loss)	185 493 20
	Total Convair Profit	6 032 332 24
	Profit: (San Diego Division)	
	Convair Profit	6 032 332 24
	Plus: San Diego G.O. Overhead	1 071 774 00
	Fort Worth G.O. Overhead	161 011 00
	Pomona G.O. Overhead	5 662 18
	Total San Diego Profit	7 270 779 42
	Cost of Sales: (Convair)	
	Total Indicated Costs	72 158 022 00
	Cost of Sales: (San Diego Division)	
	Convair Cost of Sales	72 158 022 00
	Less: San Diego G.O. Overhead	1 071 774 00
	Fort Worth G.O. Overhead	161 011 00
	Pomona G.O. Overhead	5 662 18
	San Diego Cost of Sales	70 919 574 82
	Sales:	
	Total Indicated Costs	72 158 022 00
	Convair Profit	6 032 332 24
	Total Sales	78 190 354 24

CONTRACT AF 33(600)-33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

AS OF APRIL 30, 1958 BASED ON MARCH BUDGET Page 2 of 2

	Airplanes
III: Rate of Profit to Sales	
Convair	7.71
San Diego	9.30
Rate of Profit to Cost (Convair)	8.36

UNIT COST TOTAL SALES / AIRPLANES 78 190 354 21 / 140 = 558 502 53

CONTRA

SALES, COST OF SALES A

AS OF APRIL 30, 1958 BA

	UNITS	MONTH OF APRIL DELIVERIES AVE. UNIT	TOTAL	F-102A & BOOKED THR UNITS	AVE. U
Sales					
F-102A	31	558 502 53	17 313 578 43	32	556
TF-102A					
Total					
Cost of Sales					
F-102A			15 703 415 64		
TF-102A					
Total					
Profit					
F-102A			1 610 162 79		
TF-102A					
Total					
Per Cent to Sales			9.30%		

Cost Accounting Department
Works Accounting Section
Plant II, Ext. 564

T AF 33(600)- 33695

D PROFIT ON MODELS F-102A & TF-102A

ED ON MARCH BUDGET REPORT

F-102A UGH IT	MARCH TOTAL	ADJUSTMENT TO MARCH	UNITS	BOOKED THROUGH APRIL AVE. UNIT	TOTAL	NET BOOKED AMOUNT
57 98	17 813 055 36	59 025 60	63	558 502 53	35 185 659 39	17 372 604 03
	16 213 442 99	3 465 56			31 913 393 07	15 699 950 08
	1 599 612 37	62 491 16			3 972 266 32	1 672 653 95
	8.98%				9.30%	

CONTRACT AF 33(600)-33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

As of March 31, 1958 Based on February Budget

			Airplanes
I:	Calculation of Incentive Profit:		
	Contract Target Cost		68 749 940 00
	Total Indicated Costs-Proj. Target Report		72 200 822 00
	Less: Engineering Changes		4 306 215 00
	Total Indicated Allowable Costs of Orig. Task		67 894 607 00
	Indicated Underrun or (Overrun)		855 333 00
	Incentive Profit or (Loss) Sharing (20%)		171 066 60
II:	Sales, Cost of Sales and Profit		
	Profit: (Convair)		
	Contract Target Profit (8%)		5 499 995 20
	Total Engineering Changes	4 306 215 00	
	Less: Personal Property taxes	- -	
	Engineering Changes (8%)		344 497 20
	Incentive Profit or Loss		171 066 60
	Total Convair Profit		6 015 559 00
	Profit: (San Diego Division)		
	Convair Profit		6 015 559 00
	Plus: San Diego G.O. Overhead		1 069 119 00
	Fort Worth G.O. Overhead		165 014 00
	Pomona G.O. Overhead		5 662 18
	Total San Diego Profit		7 255 354 18
	Cost of Sales, (San Diego Division)		
	Convair Cost of Sales		72 200 822 00
	Less: San Diego G.O. Overhead		1 069 119 00
	Fort Worth G.O. Overhead		165 014 00
	Pomona G.O. Overhead		5 662 18
			70 961 026 82
	Sales:		
	Total indicated Costs		72 200 822 00
	Convair Profit		6 015 559 00
			78 216 381 00

CONTRACT AF 33(600)- 33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

as of March 31, 1958 Base February 1958 Budget

	Airplanes
III: Rate of Profit to Sales	
Convair	7.69%
San Diego	9.28%

CONTRA

SALES, COST OF SALES A

As of March 31, 193

	UNITS	MONTH OF March DELIVERIES AVE. UNIT	TOTAL	F-102A & BOOKED THR UNITS	AVE. U
Sales					
F-102A	29	558 688 44	16 201 964 76	3	556
TF-102A					
Total					
Cost of Sales					
F-102A		506 842 15	14 698 422 43		
TF-102A					
Total					
Profit					
F-102A		51 846 29	1 503 542 33		
TF-102A					
Total					
Per Cent to Sales			9.28		

Cost Accounting Department
Works Accounting Section
Plant II, Ext. 564

T AF 33(600)- 33695

D PROFIT ON MODELS F-102A & TF-102A

8 Based on February 1958 Budget

F-102A UGH IT	February TOTAL	ADJUSTMENT TO February	BOOKED THROUGH March. UNITS	AVE. UNIT	TOTAL	NET BOOKED AMOUNT
7 98	1 669 973 94	6 091 38	32	558 688 44	17 878 030 08	16 208 056 14
	1 520 010 28	516 18			16 218 948 89	14 698 938 61
	149 963 66	5 575 20 ✓			1 659 081 19	1 509 117 53
	8.98%				9.28%	

CONTRAC

SALES, COST OF SALES A

As of March 31, 1958 B

	MONTH OF March Estimated DELIVERIES			F-102A & T BOOKED THRO	
	UNITS	AVE. UNIT	TOTAL	UNITS	AVE. U
Sales					
F-102A	28	558 688 44	15 643 276 32	3	556 6
TF-102A					
Total					
Cost of Sales					
F-102A			14 191 580 32		49
TF-102A					
Total					
Profit					
F-102A			1 451 696 00		499
TF-102A					
Total					
Per Cent to Sales			9.28%		

Cost Accounting Department
Works Accounting Section
Plant II, Ext. 564

AF 33(600)- 33695

PROFIT ON MODELS F-102A & TF-102A

on February Budget Report

-102A GH T	February TOTAL	ADJUSTMENT TO February	UNITS	BOOKED THROUGH March AVE. UNIT	TOTAL	NET BOOKED AMOUNT
7 98	1 669 973 94	6 091 38	31	558 688 44	17 319 341 64	15 649 367 70
	1 520 010 98	516 14			15 712 106 74	14 192 096 46
7 79	149 963 66	5 575 94			1 607 234 90	1 457 271 24
	8.98%				9.28	

CONTRACT AF 33(600)- 33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

DECEMBER

Page 1 of 2

	Airplanes	
I: Calculation of Incentive Profit:		
Contract Target Cost	~~68 749 940 00~~	68 749 940 00
Total Indicated Costs-Proj. Target Report	~~71 805 845 00~~	71 805 845 00
Less: Engineering Changes	~~3 061 536 00~~	3 061 536 00
Total Indicated Allowable Costs of Orig. Task	~~68 744 309 00~~	68 744 309 00
Indicated Underrun or (Overrun)	~~5 631 000 00~~	5 631 00
Incentive Profit or (Loss) Sharing (20%)	~~-1 126 200 00~~	1 126 20
II: Sales, Cost of Sales and Profit		
Profit: (Convair)		
Contract Target Profit (8.0)%	~~5 499 995 20~~	5 499 995 20
Engineering Changes	~~244 922 88~~	244 922 88
Incentive Profit or (Loss)	~~1 126 200 00~~	1 126 20
Total Convair Profit	~~6 871 118 08~~	5 746 044 28
Profit: (San Diego Division)		
Convair Profit	~~6 871 118 08~~	5 746 044 28
Plus: San Diego G.O. Overhead	~~1 031 953 00~~	1 031 953 00
Fort Worth G.O. Overhead	~~137 506 00~~	137 506 00
Pomona G.O. Overhead	~~5 015 00~~	5 015 00
Total San Diego Profit	~~8 045 592 08~~	6 920 518 28
Cost of Sales: (Convair)		
Total Indicated Costs	~~71 805 845 00~~	71 805 845 00
Cost of Sales: (San Diego Division)		
Convair Cost of Sales	~~71 805 845 00~~	71 805 845 00
Less: San Diego G.O. Overhead	~~1 031 953 00~~	1 031 953 00
Fort Worth G.O. Overhead	~~137 506 00~~	137 506 00
Pomona G.O. Overhead	~~5 015 00~~	5 015 00
San Diego Cost of Sales	~~72 980 319 00~~	70 631 471 00
Sales:		
Total Indicated Costs	~~71 805 845 00~~	71 805 845 00
Convair Profit	~~6 871 118 08~~	5 746 044 98
Total Sales	~~78 676 963 08~~	77 551 889 98

CONTRACT AF 33(600)- 33695

CALCULATION OF SALES, COST OF SALES AND PROFIT

		Airplanes	
III:	Rate of Profit to Sales		
	Convair	~~8.73%~~	7.41
	San Diego	~~10.23%~~	8.92
	Rate of Profit to Cost		
	Convair	~~9.57%~~	8.00
	San Diego	~~11.20%~~	9.63

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ULATIVE DIRECT PRODUCTION HOU

CONTRACT AF 33(600

30-JUNE 1955**

Model Number	Airplane Number	Total Hours		Detail Fabrication	Detail Rework	Assemblies	Assembly Rework
Prototype YF-102							
8-80	1	393,408.4	✓	147,677.1		154,169.0	
8-80	2	368,142.3	✓	147,677.2		154,169.0	
Total 8-80		761,550.7		295,354.3	-0-	308,338.0	-0-
Production YF-102							
8-82	3	259,800.1	✓	43,478.3	723.9	65,170.5	23,890.8
8-82	4	253,299.4	✓	/	/	/	/
8-82	5	246,096.4	✓				
8-82	6	241,766.3	✓				
8-82	7	227,988.7	✓				
8-82	8	217,510.3	✓				
8-82	9	205,988.3	✓	/	/	/	/
8-82	10	204,343.3	✓	43,478.8	724.3	65,170.8	23,890.8
Total 8-82		1,856,792.8		347,826.9	5,791.6	521,364.3	191,126.4
Production YF-102A							
8-90	1	304,412.3	✓	76,264.6	1,082.2	54,314.3	4,177.1
8-90	2	289,058.9	✓	/	/	/	/
8-90	3	273,114.5	✓	/	/	/	/
8-90	4	265,929.8	✓	76,264.9	1,082.3	54,314.5	4,177.2
Total 8-90 (Note #3)		1,132,515.5		305,058.7	4,328.9	217,257.4	16,708.5
Production F-102A							
8-10	1	203,491.1		16,783.2	214.1	24,983.2	1,119.6
8-10	2	167,283.9		/	/	/	/
8-10	3	150,538.1					
8-10	4	138,185.9					
8-10	5	129,326.3					
8-11	1	111,838.6					
8-10	6	114,194.2					
8-10	7	106,164.7					
8-10	8	103,173.9					
8-10	9	101,780.4					
8-10	10	96,128.8					
8-10	11	92,626.5		/	/	/	/
8-10	12	87,405.0		16,784.3	214.4	24,983.2	1,120.5
TOTAL LOT 1		1,602,077.4		218,183.9	2,783.6	324,781.6	14,555.7

URLY REPORT BY AIRPLANE

0)-5942

Page 1 of 2

Installations	Installation Rework	Other (See Note #1)	Ding Dong Configuration
87,276.1		4,286.2	
62,010.0		4,286.1	
149,286.1	-0-	8,572.3	-0-
113,358.0	4,292.0	8,881.6	
100,713.5	10,440.8	/	
93,675.8	9,659.3		
89,070.0	10,551.2		616.2
76,079.8	9,763.8		
63,706.9	11,658.3		
56,488.4	7,354.8	/	
55,719.0	6,478.0	8,881.6	
648,811.4	70,203.2	71,052.8	616.2
145,116.5	11,049.8	12,407.8	
122,853.4	17,959.5	/	
107,501.4	17,367.1	/	
102,421.3	15,261.6	12,408.0	
477,892.6	61,638.0	49,631.4	-0-
138,203.1	19,120.7	2,567.1	
98,713.4	22,903.2	/	
86,600.4	18,270.4		
74,957.8	17,560.8		
68,276.8	15,382.2		
53,376.1	12,795.2		
56,265.9	12,261.0		
48,166.8	10,671.4		1,659.2
46,375.9	11,130.7		
44,874.1	11,239.0		
39,284.8	11,176.7		
36,024.7	10,934.5	/	
32,189.7	9,545.6	2,567.3	
823,749.5	182,991.4	33,372.5	1,659.2

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ACCUMULATIVE DIREC

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Model Number	Airplane Number	Total Hours	Detail Fabrication	Detail Rework	Assemblies
Production F-102A					
8-10	13	√82125√	110463	2288	79833
8-10	14	√60199			
8-10	15	√341√6			
8-10	16	499118			
8-10	17	4√8618			
8-10	18	431388			
8-10	19	383436			
8-10	20	3698√1			
8-10	21	346236			
8-10	22	312272			
8-10	23	299170			
8-10	24	282236			
8-10	25	268729			
8-10	26	263√30			
8-10	27	2√0√93			
8-10	28	244082	110473	2294	79836
Total Lot 2		608√739	1767418	36614	127733
Total 8-10		22106√13	39492√7	644√0	4√2√147
TOTAL CONTRACT-5942		√961√103	134316√6	16√6√√	14994744

Note #1. "Other hours" consist of the following:

Unallocated Details
Unallocated Assemblies
Rework of Subcontracted Parts
Line Move
Skewed Axis M.L.G.
Other Program Costs
Undetermined Details
Undetermined Assemblies
Total Other

Note #2. Hours for Fort Worth production activity (189,884√) are combined with San Dieg Hours and reported together under the applicable headings.

Note #3. Detail and assembly totals include hours manufacture of parts based on original ac beyond present four Airplanes.

COST ACCOUNTING DEPARTMENT
WORKS ACCOUNTING, PLANT 2
Ext. 564
Report No. 4-2

TION HOURLY REPORT BY AIRPLANE

F 33(600)-5942

E 1955**

Page 2 of 2

mbly ork		Installations	Installation Rework	Other (See Note #1)	Ding Dong Configuration
5517		282385	80663	20976	
		274279	66843		
		256502	58577		
		227435	50532		2074
		196624	42917		
		178594	33717		
		142558	21801		
		131707	19067		
		109326	17833		
		82915	10280		
		70909	9184		
		54659	8500		
		44378	5274		
		39206	5247		
		26470	5046		
5524		22489	2476	20990	
88179		2140436	437957	335630.	2074
33836		10377931	2267871	669355	18666
12185		23137832	3586283	1961920	24828
33779					
53069					
69739					
87723					
13564					
46205					
619					
57422					
61920					

Note #5.

Total Hours by Airplane	59615103
Less: Fort Worth	1898845
S.D. Model 8-80	7615507
Plus: Detail in Note #4	610137
Other Palmdale	64123
Flight Test Program	211905
Instrumentation	66667
Project Target Status	5654481

Note #4. The following information relates the total production hours by Airplane as shown on this report to the total Manufacturing Hours as reported in the Model 8 Statement of Accumulated Costs:

	8-82	8-90	8-10
Production Hours by Airplane	18567928	11325155	2210651
Less: Fort Worth	1656325	131050	11147
Plus: Mockup & Proofing	813997	1787484	177235
Model 8 Electronics	392596		
Static Test Parts & Tools	275054		
Support of Tests	827474	1567	14580
C. T. C. Recommendations	85036		
Common Parts 8-90	155312	<155312>	
Other			
Statement of Accumulated Costs	19461072	12827844	2391320

**For the accounting period ending 19-June-1955.

CONVAIR - SD

DIRECT PRODUCTION HOURLY REPORT BY AIRPLANE
ACCEPTANCE STATUS MODEL 8 AIRPLANES

C.V. NO.	A.F. NO.	ACCEPTANCE	DATE	LOCATION
8001	7994	Final	2 October 1953	Crash
*8002	7995	Conditional	17 August 1954	Exp. Factory
8003	1779	Final	24 September 1954	Hughes
8004	1780	Conditional	31 August 1954	Edwards
8005	1781	Conditional	31 August 1954	Exp. Factory
8006	1782	Final	21 October 1954	Hughes
8007	1783	Conditional	29 July 1954	Palmdale
8008	1784	Final	13 October 1954	A.F.F.T.C.
8009	1785	Final	20 September 1954	N.A.C.A.
8010	1786	Final	26 October 1954	Hughes
9001	1787	Conditional	23 December 1954	Edwards
9002	1788	Conditional	31 January 1955	Holloman
9003	1789	Final	19 March 1955	Hughes
9004	1790	Final	20 April 1955	Hughes
1001	1791	Conditional	29 June 1955	Edwards
*1002	1792		7 July 1955	Palmdale
*1003	1793		14 July 1955	Palmdale
*1004	1794		1 July 1955	Exp. Factory
*1005	1795		12 July 1955	S.D. Field Opr.
*1006	1796		19 July 1955	Paint
*1007	1797		5 July 1955	Exp. Factory

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*Revised

Cost Accounting Department
Works Accounting, Plant II
22 July 1955
Report No. 4-2

Distribution:
Blakely, J. S. — Add D Smith
Burrows, D. C.
Hendricks, A. L.
Herbig, J. R.
Higgins, A. P.
Jones, J. M.
Morgan, A. W.
Osborn, P. G.
Pederson, R. C.
Van Horn, W. L.

	8-82		8-90		8-10	
	W.O.	Hrs.	W.O.	Hrs.	W.O.	Hrs
Prod. Hrs. By Airplane		18569928		11325155		22106513
Less Ft Worth		<1656325>		<131050>		<111470>
Add - Mock Up & Roofing						
	5250	256814 ✓	54[illegible]	876297	5656	783896
	5257	557163 ✓	5457	891187	5657-70	988458
Total		813977		1787484		1772354
Model 8 Electronics						
	5252	397596 ✓				
	SA-715851					
Static Test Parts & Tools						
	5277	775654 ✓				
Support of Test						
			5464	726 ✓	5697 (Cd)	100514
				–	5647	
	5270	111	5444	6 ✓	5652	45485 ✓
	5271	87 ✓	5416	10 ✓		
	5274	16580 ✓	5477	5 ✓	5625	<16592>
	5290	2684 ✓	5475-717-114	820 ✓	5626	<2074>
	5291	1123 ✓		–	5629	2990
	5292	576825 ✓			5662	15244
	5293	236786 ✓			5622	80
	5627	<6162> ✓			5665	160
	5278	5440 ✓				
Total		827474		1567		145808
C.T.C. Recommendation						
	5262	85036 ✓				
Common Parts	5233-5260	155312		<155312>		
Extras						
Statement of Accum Cost		19461072		12827844		23913205

EYE EASE NO 5407
BUFF NO 3407

Other Hrs.	Total	8-80	8-82	8-90	8-10
Unpl. Detail	1333779		486309	436815	410655
Unpl. Assy	53069		21058	4416	27595
Rework of S/C	69739	145	19314	7382	42898
Line Move	87723		37739	6026	43958
Skewed Axis MLG.	113564				113564
Other Prog. Costs	246205	85578	88267	41675	30685
Undetermined Detail	619		619		
" Assy	57222		57222		
Total Other Hrs	1961920	85723	710528	496314	669355

EYE EASE NO 5407
BUFF NO 3407

FT. Worth with IDI Rpt Rec.

FT. Worth Hrs on Airplane Rpt		1898845
	W.O.	
Hrs Not Pick u/p	5701	9320
	5111	6080
	5192	14320
	5209	130990
	5219	69790
	5559	620
	5646	600
	5693	490
Adj. IDI 5307	5200	<5370>
IDI Rpt Total Hours		2136425

EYE-EASE NO 5407
BUFF NO 3407

CONVAIR - SD

DIRECT PRODUCTION HOURLY REPORT BY AIRPLANE ACCEPTANCE STATUS MODEL 8 AIRPLANES

C.V. NO.	A.F. NO.	ACCEPTANCE	DATE	LOCATION
8001	7994	Final	2 October 1953	Crash
8002	7995	Conditional	17 August 1954	Edwards
8003	1779	Final	24 September 1954	Hughes
8004	1780	Conditional	31 August 1954	Edwards
*8005	1781	Conditional	31 August 1954	Exp. Factory
8006	1782	Final	21 October 1954	Hughes
8007	1783	Conditional	29 July 1954	Palmdale
8008	1784	Final	13 October 1954	A.F.F.T.C.
8009	1785	Final	20 September 1954	N.A.C.A.
8010	1786	Final	26 October 1954	Hughes
9001	1787	Conditional	23 December 1954	Edwards
9002	1788	Conditional	31 January 1955	Holloman
9003	1789	Final	19 March 1955	Hughes
9004	1790	Final	20 April 1955	Hughes
*1001	1791	Conditional	24 June 1955	Edwards
*1002	1792		5 July 1955	S.D. Field Operations
*1007	1797		5 July 1955	Exp. Factory

*Revised

Cost Accounting Department
Works Accounting, Plant II
5 July 1955

Distribution:
- Blakely, J. S.
- Burrows, D. C.
- Hendricks, A. L.
- Herbig, J. R.
- Higgins, A. P.
- Jones, J. M.
- Osborn, P. G.
- Pederson, R. C.
- Van Horn, W. L.

BRUNING COPYFLEX 789-14A

ACCUMULATIVE DIR

Model Number	Airplane Number	Total Hours	Detail Fabrication	Detail Rework	Assemblies	Assem Rewo
Prototype YF-102						
8-80	1	393,408.4	147,677.1		154,169.0	-
8-80	2	368,142.3	147,677.2		154,169.0	
Total 8-80		761,550.7	295,354.3	-.-	308,338.0	-
Production YF-102						
8-82	3	259,669.1	43,393.7	7,23.9	65,129.0	23,8
8-82	4	253,168.4	43,393.7	723.9	65,129.0	23,8
8-82	5	245,360.3	43,393.7	723.9	65,129.0	23,8
8-82	6	241,635.4	43,393.7	723.9	65,129.0	23,8
8-82	7	227,857.9	43,393.7	724.0	65,129.0	23,
8-82	8	217,379.6	43,393.8	724.0	65,129.0	23,8
8-82	9	205,857.6	43,393.8	724.0	65,129.0	23,8
8-82	10	204,211.5	43,393.8	724.0	65,129.1	23,8
Total 8-82		1,855,139.8	347,149.9	5,791.6	521,032.1	191,
Production F-102A						
8-90	1	303,792.5	75,966.1	1,081.0	54,006.1	4,1
8-90	2	288,439.1	75,966.1	1,081.0	54,006.1	4,1
8-90	3	272,494.9	75,966.1	1,081.0	54,006.2	4,1
8-90	4	265,309.5	75,866.2	1,081.0	54,006.2	4,1
Total 8-90 (Note #3)		1,130,036.0	303,864.5	4,324.0	216,024.6	16
Production F-102A						
8-10	1	193,853.3	15,968.6	177.5	22,929.3	9
8-10	2	155,243.8	15,968.6	177.5	22,929.3	9
8-10	3	131,289.4	15,968.6	177.5	22,929.3	9
8-10	4	117,116.6	15,968.6	177.5	22,929.3	9
8-10	5	110,692.3	15,968.6	177.6	22,929.3	9
8-11	1	103,658.4	15,968.6	177.6	22,929.3	9
8-10	6	96,548.5	15,968.6	177.6	22,929.3	9
8-10	7	91,505.0	15,968.6	177.6	22,929.3	9
8-10	8	84,043.4	15,968.6	177.6	22,929.3	9
8-10	9	81,822.8	15,968.6	177.6	22,929.4	9
8-10	10	78,848.1	15,968.7	177.6	22,929.4	9
8-10	11	75,025.9	15,968.7	177.6	22,929.4	9
8-10	12	72,712.4	15,968.7	177.6	22,929.4	9
TOTAL LOT 1		1,392,359.9	207,592.1	2,308.4	298,081.3	12,3

ECT PRODUCTION HOURLY REPORT BY [illegible]RPLANE
CONTRACT AF 33(600)-5942
31 MAY 1955 **

Page 1 of 2

bly rk		Installations	Installation Rework	Other (See Note #1)	Ding Dong Configuration
		87,276.1		4,286.2	
		62,010.0		4,286.1	
—		149,286.1	—0—	8,572.3	—0—
90.2		113,358.0	4,297.0	8,877.3	
90.2		100,713.5	10,440.8	8,877.3	
90.2		93,475.8	9,459.3	8,877.4	11.0
90.2		89,070.0	10,551.2	8,877.4	
90.2		76,079.8	9,763.8	8,877.4	
90.2		63,706.9	11,658.3	8,877.4	
90.2		56,488.4	7,354.8	8,877.4	
90.2		55,719.0	6,478.0	8,877.4	
21.6		648,811.4	70,203.2	71,019.0	11.0
77.1		145,116.5	11,049.8	12,395.9	
77.1		122,853.4	17,959.5	12,395.9	
77.1		107,501.4	17,367.1	12,396.0	
77.2		102,421.3	15,261.6	12,396.0	
08.5		477,892.6	61,638.0	49,583.8	—0—
52.9		132,879.7	18,843.7	2,101.6	
52.9		91,421.5	21,692.4	2,101.6	
52.9		74,040.4	15,119.1	2,101.6	
52.9		60,492.8	14,492.9	2,101.6	
52.9		56,370.3	12,192.0	2,101.6	
52.9		48,772.2	12,756.2	2,101.6	
52.9		43,970.8	10,447.7	2,101.6	
52.9		38,876.7	10,258.2	2,101.7	240.0
52.9		32,181.9	9,731.4	2,101.7	
52.9		31,013.9	8,678.7	2,101.7	
52.9		28,080.7	8,637.1	2,101.7	
53.0		25,813.4	7,082.1	2,101.7	
53.0		24,553.3	6,028.7	2,101.7	
67.9		688,467.6	155,961.2	27,321.4	240.0

BRUNING COPYFLEX 129-14A

ACCUMULATIVE DIRECT PRODUCTION

CONTRACT AF 33(

31 MAY 1955

Model Number	Airplane Number	Total Hours	Detail Fabrication	Detail Rework	Assemblies	Assembly Rework
Production F-102A						
8-10	13	43,588.5	10,011.4	182.5	5,554.2	369.1
8-10	14	41,974.4	10,011.4	182.5	5,554.2	369.1
8-10	15	39,878.2	10,011.4	182.5	5,554.2	369.2
8-10	16	35,232.0	10,011.4	182.6	5,554.2	369.2
8-10	17	30,675.9	10,011.4	182.6	5,554.2	369.2
8-10	18	27,056.7	10,011.4	182.6	5,554.2	369.2
8-10	19	24,255.5	10,011.4	182.6	5,554.2	369.2
8-10	20	24,324.3	10,011.4	182.6	5,554.2	369.2
8-10	21	23,170.9	10,011.4	182.6	5,554.2	369.2
8-10	22	21,588.7	10,011.4	182.6	5,554.2	369.2
8-10	23	20,622.5	10,011.4	182.6	5,554.2	369.2
8-10	24	19,738.7	10,011.4	182.6	5,554.2	369.2
8-10	25	19,167.4	10,011.5	182.6	5,554.2	369.2
8-10	26	19,076.8	10,011.5	182.6	5,554.2	369.2
8-10	27	18,506.9	10,011.5	182.6	5,554.2	369.2
8-10	28	18,614.2	10,011.5	182.6	5,554.2	369.2
Total Lot 2		427,471.6	160,182.8	2,921.3	88,867.2	5,907.0
Total 8-10		1,819,831.5	367,774.9	5,229.7	386,948.5	18,294.9
TOTAL CONTRACT-5942		5,566,558.0	1,314,143.6	15,345.3	1,432,343.2	226,125.0

Note #1. "Other hours" consist of the following:

Unallocated Details	127,562.4
Unallocated Assemblies	4,635.6
Rework of Subcontracted Parts	6,033.2
Line Move	7,594.0
Skewed Axis M.L.G.	6,518.0
Other Program Costs	23,878.5
Undetermined Details	61.9
Undetermined Assemblies	5,722.2
Total Other	182,005.8

Note #2. Hours for Fort Worth production activity (186,312.5) are combined with San Diego Hours and reported together under the applicable headings.

Note #3. Detail and assembly totals include hours for the manufacture of parts based on original schedule beyond present four Airplanes.

COST ACCOUNTING DEPARTMENT
WORKS ACCOUNTING, PLANT II
Ext. 564

Report No. 4-2

ODUCTION HOURLY REPORT BY AIRPLA

CT AF 33(600)-5942

MAY 1955 **

bly rk		Installations	Installation Rework	Other (See Note #1)	Ding Dong Configuration
369.1		21,327.9	4,549.1	1,594.3	
369.1		20,691.6	3,571.3	1,594.3	
369.2		19,135.6	3,031.0	1,594.3	
369.2		15,487.7	2,020.6	1,594.3	2.0
369.2		10,749.6	2,214.6	1,594.3	
369.2		8,144.5	1,200.5	1,594.3	
369.2		5,695.4	848.4	1,594.3	
369.2		5,801.6	811.0	1,594.3	
369.2		4,855.5	603.7	1,594.3	
369.2		3,410.5	466.5	1,594.3	
369.2		2,505.8	405.0	1,594.3	
369.2		1,677.9	349.0	1,594.4	
369.2		1,083.1	372.4	1,594.4	
369.2		963.7	401.2	1,594.4	
369.2		460.4	334.6	1,594.4	
369.2		750.3	152.0	1,594.4	
907.0		122,741.1	21,340.9	25,509.3	2.0
294.9		811,208.7	177,302.1	52,830.7	242.0
125.0		2,087,198.8	309,143.3	182,005.8	253.0
562.4					
635.6					
033.2					
594.0					
518.0					
878.5					
61.9					
722.2					
005.8					

Note #5.

Total Hours by Airplane		5,566,558.0
Less:	Fort Worth	186,312.5
	S.D. Model 8-80	761,550.7
Plus:	Detail in Note #4	592,838.3
	Other Costs	
	Palmdale	4,154.1
	Flight Test Program	20,490.3
	Instrumentation	6,531.1
Project Target Status Report		5,242,708.6

Note #4. The following information relates the total production hours by Airplane as shown on this report to the total Manufacturing Hours as reported in the Model 8 Statement of Accumulated Costs:

		8-82	8-90	8-10
Production Hour by Airplane		1,855,139.8	1,130,036.0	1,819,831.5
Less:	Fort Worth	165,374.5	13,084.0	7,854.0
Plus:	Mockup & Proofing	81,399.7	178,748.4	167,783.4
	Model 8 Electronics	35,912.4		
	Static Test Parts & Tools	27,505.4		
	Support of Tests	82,842.1	264.1	9,879.2
	C. T. C. Recommendations	8,503.6		
	Common Parts 8-90	15,531.2	<15,531.2>	
	Other			
	Statement of Accumulated Costs	1,941,459.7	1,280,433.3	1,989,640.1

**For the accounting period ending ~~22 May 1955~~. 19 June 1955

Note #1
Other Hours

	Total	8-80	8-82	8-90	8-10
Unal. Detail	1275624		486293	436864	352467
Unal Assy	46356		21058	4416	20882
Rework of S/C	60332	145	19290	7382	33515
Line Move	75940		37739	6026	32175
Skewed Axls MLG.	65180				65180
Other Prog Costs	238785	85578	87769	41150	24088
Undetermined Details	619		619		
" Assy	57222		57222		
Total Other Hrs	1820058	85723	710996	495838	528307

Ft. Worth Recon. with IDF RpT

Ft. Worth Hrs on Airplane Rpt		1863125
Hrs not Pick-Up	5646	688
	5101	9320
	5111	6080
	5192	14320
	5209	130990
	5219	69790
	5559	620
	5693	490
Total Hrs on IDI Rpt		2095335

EYE EASE NO 5407
BUFF NO 3407

①	②	③	④	⑤	⑥	⑦
	8-22		8-90		8-10	
	W.O.	HOURS	W.O.	HOURS	W.O.	HOURS
PRODUCTION HOURS BY AIRPLANE		18551398		11300360		18198315
LESS FORT WORTH		<1653745>		<130840>		<785407>
ALL - MOCKUP & PROOFING						
	5250	256814 ✓	5456	89297	5656	760333
	5257	557183 ✓	5457	89187	5657-715	917501
TOTAL		813997		178484		1677834
MODEL & ELECTRONICS						
	5252 S.A. 715 61	359124 ✓				
STATIC TESTS PARTS & TOOLS						
	5272	275054 ✓				
SUPPORT OF TEST	5627	<1107>				
	5277	320	5464	126		
	5259	15	5491	119	5697(ac-12)	100275
	5270	111 ✓			5647	1
	5271	87 ✓	5444	6 ✓	5659	38
	5274	10580 ✓	5466-715	10 ✓	5652(a-12)	<21277>
	5290	2684 ✓	5497	5 ✓	5625	<2400>
	5291	1123 ✓	5475	760	5626	<20>
	5292	376825 ✓	5498	15	5000	8
	5293	236786 ✓			5662	3017
TOTAL		828421		2641		98792
C.T.C RECOMMENDATION						
	5262	85036 ✓				
COMMON PARTS 8-90						
TRANSFER	5233-5200	155312		<155312>		
Ding Rong					5625 5626	
OTHER						
STATEMENT OF ACTUAL COST		19414597 ✓		12804323 ✓		19896401

EYL LABEL NO 5407
RUFF NO 3407

BRUNING COPYFLEX 289.144

629-1
-410-

ACCUMULATIVE DIRECT PRODUCT

CONTRACT AF

30

Model Number	Airplane Number	Total Hours	Detail Fabrication	Detail Rework	Assemblies	Assembly Rework
Prototype YF-102						
8-80	1	3,934084	1476771		1541690	
8-80	2	3681423	1476772		1541690	
Total 8-80		7615507	2953543	-0-	3083380	-0-
Production YF-102						
8-82	3	2596344	433767	7205	651193	238902
8-82	4	2531337	433767	7205	651193	238902
8-82	5	2453147	433767	7205	651194	238902
8-82	6	2416010	433768	7206	651194	238902
8-82	7	2278234	433768	7206	651194	238902
8-82	8	2173450	433768	7206	651194	238902
8-82	9	2058230	433768	7206	651194	238902
8-82	10	2041768	433768	7206	651194	238902
Total 8-82		18548520	3470141	57645	5209550	1911216
Production F-102A						
8-90	1	3028578	755978	10759	534559	41759
8-90	2	2875045	755979	10759	534559	41759
8-90	3	2714943	755979	10760	534559	41759
8-90	4	2632915	755979	10760	534560	41759
Total 8-90 (Note #3)		11251481	3023915	43038	2138237	167036
Production F-102A						
8-10	1	1620510	148620	1253	191722	6065
8-10	2	1218217	148620	1253	191722	6065
8-10	3	1003426	148620	1253	191723	6065
8-10	4	886518	148620	1253	191723	6065
8-10	5	819459	148620	1253	191723	6065
8-11	1	767934	148620	1253	191723	6065
8-10	6	724941	148621	1253	191723	6065
8-10	7	686070	148621	1253	191723	6065
8-10	8	635963	148621	1253	191723	6065
8-10	9	622264	148621	1253	191723	6065
8-10	10	581590	148621	1254	191723	6065
8-10	11	560211	148621	1254	191723	6065
8-10	12	503820	148621	1254	191723	6066
TOTAL LOT 1		10630723	1932067	16292	2492397	78846

ECT PRODUCTION HOURLY REPORT BY AIR ANE

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bly rk		Installations	Installation Rework	Other (See Note #1)
		872761		42862
		620100		42861
-0-		1492861	-0-	85723
902		1133580	42970	88727
902		1007135	104408	88727
902		936758	96593	88728
902		890700	125512	88728
902		760798	97638	88728
902		637069	112583	88728
902		564884	73548	88728
902		557190	64780	88728
216		6488114	702032	709822
759		1451165	110498	123860
759		1228534	179595	123860
759		1074254	173671	123861
759		1013380	152616	123861
036		4767433	616380	495442
065		1113189	146020	13641
065		723985	132931	13641
065		533923	108201	13641
065		412708	112308	13641
065		357587	102570	13641
065		329677	76954	13642
065		287736	75901	13642
065		257301	67465	13642
065		214154	62525	13642
065		211181	49779	13642
065		180104	40181	13642
065		161330	37576	13642
066		115832	26682	13642
846		4898707	1035073	177341

ACCUMULATIVE DIRECT PR

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Model Number	Airplane Number	Total Hours	Detail Fabrication	Detail Rework	Assemblies	Assembly Rework
Production F-102A						
8-10	13	228784	83414	1037	27452	1274
8-10	14	210389	83414	1037	27452	1274
8-10	15	199662	83414	1037	27452	1275
8-10	16	173793	83414	1037	27452	1275
8-10	17	156057	83414	1037	27453	1275
8-10	18	142852	83414	1037	27453	1275
8-10	19	131705	83414	1037	27453	1275
8-10	20	132390	83415	1037	27453	1275
8-10	21	125863	83415	1038	27453	1275
8-10	22	126863	83415	1038	27453	1275
8-10	23	125023	83415	1038	27453	1275
8-10	24	124638	83415	1038	27453	1275
8-10	25	124739	83415	1038	27453	1275
8-10	26	124335	83415	1038	27453	1275
8-10	27	123243	83415	1038	27453	1275
8-10	28	122543	83415	1038	27453	1275
Total Lot 2		2372879	1334633	16600	439244	20398
Total 8-10		13003602	3266700	32892	2931641	99244
TOTAL CONTRACT-5942		50419110	12714299	133575	15362808	217496

Note #1. "Other hours" consist of the following:

Unallocated Details	117,548.6
Unallocated Assemblies	3869.4
Rework of Subcontracted Parts	4,744.8
Line Move	6,203.3
Other Program Costs	23021.5
Undetermined Details	61.9
Undetermined Assemblies	5722.2
Total Other	161,171.7

Note #2. Hours for Fort Worth production activity (1829055) are combined with San Diego hours and reported together under the applicable headings.

Note #3. Detail and assembly totals include hours for the manufacture of parts based on original schedule beyond present four Airplanes.

INDUSTRIAL ACCOUNTING
PLANT II, Ext. 564

ECT PRODUCTION HOURLY REPORT BY AI LANE

CONTRACT AF 33(600)-5942

30 April 1955

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ly rk	Installations	Installation Rework	Other (See Note #1)
774	87174	19472	8961
774	72063	16188	8961
775	63674	13849	8961
775	43580	8073	8962
775	26959	6957	8962
775	16954	3757	8962
775	6204	3360	8962
775	7928	2320	8962
775	1820	1900	8962
775	2220	2500	8962
775	1120	1760	8962
775	880	1615	8962
775	580	2016	8962
775	688	1504	8962
775	550	550	8962
775	400		8962
798	332794	85821	143389
44	5231501	1120894	320730
496	17979909	2439306	1611717

Note #5.

Total Hours by Airplane		5,041,911.0
Less:	Fort Worth	<182,905.5>
	S. D. Model 8-80	<761,550.7>
Plus:	Detail in Note #4	574,569.4
	Other Costs Palmdale	20433
	Flight Test Program	19579.7
	Instrumentation	6395.8
Project Target Status Report		4700,043.0

Note #4. The following information relates the total production hours by Airplane as shown on this report to the total Manufacturing Hours as reported in the Model 8 Statement of Accumulated Costs:

		8-82	8-90	8-10
Production Hour by Airplane		1,854,852.0	1,125,148.1	1,300,360.2
Less:	Fort Worth	<165,334.5>	<13,084.0>	<4,487.0>
Plus:	Mockup & Proofing	81,399.7	178748.4	153,170.8
	Model 8 Electronics	30,330.2		
	Static Test Parts & Tools	27,505.4		
	Support of Tests	82,902.1	267.6	9,961.8
	C.T.C. Recommendations	8,502.6		
	Common Parts 8-90	15,531.2	<15,531.2>	
	Skewed Axis M.L.G.			1,784.8
	Other			
	Statement of Accumulated Costs	1935689.7	1,225,543.9	1460790.6

Accumulative Direct Pr[illegible]. Hrs. Rpt. by Airplane
Contract AF33(600)-5942
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Model Number	Airplane Number	Total Hours	Detail Fabrication	Detail Rework	Assemblies
Prototype YF102					
8-80	1	3934084	1476771		1541690
8-80	2	3681423	1476772		1541690
Total 8-80		7615507	2953543	-0-	3083380
Production YF-102					
8-82	3	2596344	433767	7205	651193
	4	2531337	433767	7205	651193
	5	2453147	433767	7205	651194
	6	2416010	433768	7206	651194
	7	2278234	433768	7206	651194
	8	2173450	433768	7206	651194
	9	2058230	433768	7206	651194
	10	2041768	433768	7206	651194
Total 8-82		18548520	3470141	57645	5209550
Production F-102A	1	3028578	755978	10759	534559
	2	2875045	755979	10759	534559
	3	2714943	755979	10760	534559
	4	2632915	755979	10760	534560
Total 8-90 (Note #3)		11251481	3023915	43038	2138237
Production F-102A					
8-10	1	1620510	148620	1253	191722
	2	1218217	148620	1253	191722
	3	1003426	148620	1253	191723
	4	886318	148620	1253	191723
	5	819459	148620	1253	191723
8-11	1101	767934	148620	1253	191723
8-10	6	724941	148621	1253	191723
	7	686070	148621	1253	191723
	8	635963	148621	1253	191723
	9	622264	148621	1253	191723
	10	581590	148621	1254	191723
	11	560211	148621	1254	191723
	12	503820	148621	1254	191723
Total Lot 1		10636773	1932067	16292	2492397

embly work	Inst.	Inst. Rework	Others
	872761		42862
	620100		42861
-0-	1492861	-0-	85723
38902	1133580	42970	88727
38902	1007135	104408	88727
38902	936758	96593	88728
38902	890700	105512	88728
38902	760798	97638	88728
38902	637069	116583	88728
38902	564884	73548	88728
38902	557190	64780	88728
11216	6488114	702032	709822
41759	1451165	110498	123860
41759	1228534	179595	123860
41759	1074354	173671	123861
41759	1013380	152616	123861
67036	4767433	616380	495442
6065	1113189	146020	13641
6065	723985	132931	13641
6065	533923	108201	13641
6065	417708	112308	13641
6065	357567	100570	13641
6065	329677	76954	13642
6065	287736	75901	13642
6065	252321	67465	13642
6065	214154	65505	13642
6065	211181	49779	13642
6065	180104	40181	13642
6065	161330	32576	13642
6066	115832	26682	13642
78846	4898707	1035073	177341

Accum[illegible]ative Direct Prod. Hr [illegible]ot By Airplane
Contract AF 33(600)-5942
30 April 1955

	Airplane Number	Total Hours	Detail Fab.	Detail Rework	Assy.	A R
Prod. F-102A 8-10	13	228784	83414	1037	27452	
	14	210389	83414	1037	27452	
	15	199662	83414	1037	27452	
	16	173793	83414	1037	27452	
	17	156057	83414	1037	27453	
	18	142852	83414	1037	27453	
	19	131705	83414	1037	27453	
	20	132390	83415	1037	27453	
	21	125863	83415	1038	27453	
	22	126863	83415	1038	27453	
	23	125023	83415	1038	27453	
	24	124638	83415	1038	27453	
	25	124739	83415	1038	27453	
	26	124335	83415	1038	27453	
	27	123243	83415	1038	27453	
	28	122543	83415	1038	27453	
Total Lot 2		2372879	1334633	16600	439244	
Total 8-10		13003602	3266900	32892	2931641	
Total Contract 5942		50419110	2714299	133575	13362808	2

Note #2 F.T. Worth Hours 182,905.

sy. work	Inst.	Inst. Rework	Other
1274	87174	19472	8961
1274	72063	16188	8961
1275	63674	13849	8961
1275	43580	8073	8962
1275	26959	6957	8962
1275	16954	3757	8962
1275	6204	3360	8962
1275	7928	2320	8962
1275	1820	1900	8962
1275	2220	2500	8962
1275	1120	1760	8962
1275	880	1615	8962
1275	580	2016	8962
1275	688	1504	8962
1275	550	550	8962
1275	400		8962
20398	332794	85821	143389
99244	5231501	1120894	320730
77496	17979909	2439306	1611717

Note #4 Reconcillation
Statement of Accum Cost By Airplane
30 April 1955

	8-82 W.O.	8-82 Hrs	8-90 W.O.	8-90 Hrs	8-10 W.O.	8-10 Hrs
Prod Hrs by Airplane		18548520		11251481		13003602
Less Ft. Worth		⟨1653345⟩		⟨130840⟩		⟨44870⟩
Add Mockup & Proofing	5250	256814	5456	896297	5656	726165
	5257	557183	5457	891187	5657	865543
	Total	813997		1787484		1531708
Model 8 Electronics	5252 S.A. 215 311	303302				
Static Test Mats & Tools	5272	275054				
Support of Test	5277	560				
	5224	265	5464	726		
	5270	111	5471	1119	5697(cc.2)	99617
	5271	87			5647(cc1)	1
	5274	10580				
	5290	2684	5444	6		
	5291	1123	5466-715	10		
	5292	576825	5470	5		
	5293	236786	5475	760		
	Total	829021		2626		99618
C.T.C. Recommendation	5262	85636				
Common Parts 8-96 Transfer 5233-5200		155312		⟨155312⟩		
Skewed Axis MLG.					5652 (E12) Other Mfg	17848
Other						
Statement of Accum Cost		19356897		12755439		14607

EYE-EASE NO 5407
BLFF NO 3407

Other Hours & 890 Inst & Rework
Note 1

	Total	8-80	8-82	8-90	8-10
Unal. Detail	1175486		486318	437521	251647
Unal. Assy	38694		21058	4416	13220
Rework of S/O	47448	145	19142	7205	20956
Line Move	62033		37739	6026	18268
Other Prog Costs	230215	85578	87724	40274	16639
Undetermined Details	619		619		
" Assy	57222		57222		
Total Other Hrs	1611717	85723	709822	495442	320730

		Total	1	2	3	4
Inst. 8-90						
5421	March	4740880	1451165	1228134	1073961	987620
	W/E 3-27	5370			<7>	5377
	4-3	5541			400	5141
	4-10	8552		400		8152
	4-17	7090				7090
Total		4767433	1451165	1228534	1074354	1013380

Inst. Rework 890		602305	110498	179595	173591	138621
	March					
	W/E 3-27				80	5538
	4-3					6487
	4-10					830
	4-17					1140
		616380	110498	179595	173671	152616

Ft. Worth Recon. with IDI Rpt.

Ft Worth Hours on Airplane Rpt.			1829055
Hrs Not Pick-up.	5101	9320	
	5111	6080	
	5192	14320	
	5209	130460	
	5219	66650	
	5559	80	
Total Hrs on IDI Rpt	5693	500	227410
			2056465

EYE EASE NO 5407
BUFF NO 3407

Accumulative Direct Production Hourly Rpt by Airpl
Contract AF33(600)-5942
31 March 1955

Page 1 of 2

	Model Number	Airplane Number	Total Hours	Detail Fabrication	Detail Rework	Ass
Prototype	YF-102					
	8-80	1	3934082	1476771		15
	8-80	2	3681422	1476772		15
	Total 8-80		7615504	2953543	-0-	30
Production	YF-102					
	8-82	3	2595508	433599	7185	65
		4	2530501	433599	7185	65
		5	2452310	433600	7185	65
		6	2415171	433600	7185	65
		7	2277895	433600	7185	65
		8	2172612	433600	7185	65
		9	2057392	433600	7185	65
		10	2040931	433600	7185	65
	Total 8-82		18541820	3468798	57480	520
Production	F-102A					
	8-90		3020361	753534	10711	53
			2866429	753535	10711	53
			2706253	753535	10712	53
			2584943	753535	10712	53
	Total 8-90 (Note 3)		11177986	3014139	42846	212
Production	F-102A					
	8-10	1	1278617	136265	978	16
		2	917201	136265	977	16
		3	777100	136266	979	16
		4	691565	136266	979	16
		5	565263	136266	979	16
		1	647899	136266	979	16
		6	550148	136266	979	16
		7	528773	136266	979	16
		8	465366	136266	979	16
		9	448734	136266	979	16
		10	416224	136266	979	16
		11	398010	136266	979	16
		12	360134	136266	979	16
	Total Lot 1		8040054	1771456	12726	210

blies	Assembly Rework	Installation	Installation Rework	Other (See Note #1)
690		872761		42860
690		620100		42860
1380	-0-	1492861	-0-	85720
1042	238898	1133580	42970	88234
042	238898	1007135	104408	88234
042	238898	936758	96593	88234
042	238898	890700	105512	88234
042	238898	760798	97638	88234
1042	238898	637069	116583	88235
1042	238898	564884	73548	88235
042	238899	557190	64780	88235
8336	1911185	6488114	702032	705875
575	41752	1451165	110498	122126
0575	41753	1228134	179595	122126
0575	41753	1073961	173591	122126
0575	41753	987620	138621	122127
2300	167011	4740880	602305	488505
623	4701	867096	101111	6843
623	4701	510720	96070	6843
623	4701	398595	68093	6843
623	4701	314169	66984	6843
623	4701	208025	46816 X	6843
623	4701	298081	44406	6843
623	4701	198224	41512	6843
623	4701	178140	40241	6843
623	4701	121942	33212	6843
623	4701	107958	25363	6844
624	4702	84471	21338	6844
624	4702	71486	16109	6844
624	4702	37324	12395	6844
102	61116	3391041	613650	88963

Accumulative Direct Production Yearly Rpt by Airplane

Page 2 of 2

	Model Number	Airplane Number	Total Hours	Detail Fabrication	Detail Rework	Assem
Production	F-102A 8-10					
		13	112464	66347	661	119
		14	105994	66348	661	119
		15	99674	66348	661	119
		16	94534	66348	661	119
		17	90841	66348	661	119
		18	90121	66348	661	119
		19	89244	66348	661	119
		20	89872	66348	661	119
		21	88684	66348	661	119
		22	89594	66348	661	119
		23	88284	66348	661	119
		24	87964	66348	661	119
		25	87964	66348	661	119
		26	88006	66348	662	119
		27	87966	66348	662	-119
		28	87966	66348	662	119
	Total Lot 2		1480172	1061567	10579	1917
	Total 8-10		9520226	2833028	23305	229928
	Total Contracts 5942		46855536	12269503	123631	127069

	Assembly		Installation	Other
s	Rework	Installation	Rework	(See Note 7)
1	607	18383	6119	8360
1	607	11873	7158	8360
1	607	5922	5789	8360
1	607	3938	2633 ✓	8360
7	607	880	1998	8360
7	607	720	1437	8361
7	607	240	1040	8361
1	607	788	1120	8361
1	607	240	480 X	8361
1	607	640	970	8361
1	607	80	240	8361
1	607			8361
7	607			8361
1	608	40		8361
7	608			8361
1	608			8361
2	9715	43744	29004	133771
4	70831	3434785	642654	222734
0	2149027	16156640	1946991	1502834

Note # 4 Reconciliation
Statement of Accum Cost By Airplane
31 March, 1955

	8-82		8-90		8-10	
	W.O.	Hrs.	W.O.	Hrs	W.O.	Hrs
Prod Hrs. by Airplane		18541820		11197986		9520226
Less Ft Worth		<1650305>		<130650>		<298207>
Add Mockup & Proofing						
	5250	256794 ✓	5456	896297	5656	684500
	5257	557183 ✓	5457	891187	5657	734588
	Total	813977		1787484		1419088
Model 8 Electronics						
	4 5252	* 252233 —				
	SA.715 ✓	-1200 (511)				
Static Test Parts & Tools						
	5272	275254 ✓				
Support of Test						
to be Correct	5224	265	5464	726	5459	35272
	5270	111 ✓	5471	1119	5692 (E-cc-P)	99468
	5271	87 ✓	5475	360	5647	1
	5274	10580 ✓	Code 19-7074			
	5290	2684 ✓	5444	6		
	5291	1123 ✓	5466-715	10		
	5292	576825 ✓	5497-715	5		
	5293	236786 ✓	54475-715	400		
	Total	828461 ✓		2626		134741
C.T.C. Recommendation						
	5262	85036 ✓				
Common Parts 8-90 Transfer 5233-5200		155312		<155312>		
Skewed Axis M.A.G.					5652	5043
Other (5524,25-SA715)		—		41339		
Statement of Accum Costs		19301558		12723493		11049278

EYE-EASE NO 5407
BUFF NO 3407

"Other Hours" Work Sheet

	Total	8-80	8-82	8-90	8-10
Unnl Detail	1095279		482619	432102	180558
Unnl Assy	34504		21033	4416	9055
Rework K of S/C	38839	145	19134	7049	12511
Line Move	52936		37739	6046	9151
Other Prog. Costs	223435	85575	87509	38892	11459
Undetermined Detail	619		619		
" Assy	57222		57222		
Total Other Hrs	1502834	85720	705875	488505	222734

EYE EASE NO 5407
BUFF NO 3407

FT. Worth Rec.

FT. Worth Hrs on Rpt		1810775 - Note # 2
Hrs. Not Pickup.	5192	14320
	5209	130270
	5219	65330
	5693	470
	5101	9320
	5111	6080
Total IDI Rpt.		2036565

EYE-EASE NO 5407
BUFF NO 3407

Consolidated Vultee Aircraft Corporation
San Diego Division

Accumulative Direct Production Hourly Rpt by Airplane
Contract AF 33(600)-5942
28 February 1955

Page 1 of 2

Model Number	Airplane Number	Total Hours	Detail Fabrication	Detail Rework	As
Prototype YF-102					
8-80	1	3934078	1476771		1
8-80	2	3681417	1476772		1
Total 8-80		7615495	2953543	0	39
Production YF-102					
8-82	3	259,667.7	43,347.6	714.3	
	4	253,167.0	43347.6	714.3	
	5	245,347.8	433476	7143	
	6	241,633.9	433476	7143	
	7	227,856.3	433476	7143	
	8	217,377.9	433476	7144	
	9	205,855.9	433475	7144	
	10	204,209.8	433475	7144	
Total 8-82		1855 1163	3467806	5714.7	5
Production F-102A					
8-90	1	300,434.0	746757	1,0468	
	2	284,819.9	746757	10468	
	3	265,396.6	746757	1,0468	
	4	249,583.7	746758	10469	
Total 8-90 (Note 3)		1100,2342	2987029	41873	2
Production F-102A					
8-10	1	90,693.6	11624.8	658	
	2	66,684.2	116248	658	
	3	55,692.6	116248	658	
	4	49,160.5	116248	658	
	5	44,304.5	116248	658	
8-11	1	37,817.6	116248	658	
8-10	6	33,795.5	116248	658	
	7	32,958.8	11,6248	658	
	8	29,012.0	11,6247	659	
	9	28,028.5	116247	659	
	10	27,235.5	116247	659	
	11	26,142.0	116247	659	
	12	26,021.3	116247	659	
Total Lot 1		547,547.2	151,121.9	8559	1

mblies	Assembly Rework	Installations	Installation Rework	Other (See Note #1)
41690		872761		42856
41690		620100		42855
3380	-0-	1492861	-0-	85711
5099.1	23885.7	1133580	42970	8966.0
5099.1	23885.7	1007135	104408	8966.0
5099.1	23885.7	936758	96593	8966.0
5099.1	23885.7	890700	105512	8966.0
5099.1	23885.7	760798	97638	8966.0
5099.1	23885.6	637069	116583	8966.0
5099.2	23885.6	564884	73548	8966.0
5099.2	23885.6	557190	64780	8966.1
0793.0	191085.3	6488114	702032	71728.1
2594.1	41200	1451187	110323	11846.4
5941	41200	1225774	179595	11846.4
5941	41199	1058535	152602	11846.4
5940	41199	931877	121130	11846.4
2376.3	164798	4667323	563650	47,385.6
2569.3	236.9	624510	30669	6789
5693	236.9	386216	28869	6789
5693	236.9	286054	19115	6789
5693	236.9	216850	22998	6789
5693	236.9	172767	18521	6789
5693	236.9	111829	14590	6789
5193	236.9	76063	10135	6789
5692	237.0	68471	9359	6790
5692	237.0	32192	6170	6790
5692	237.0	23351	5176	6790
5692	237.0	17418	3179	6790
5692	237.0	6750	2918	6790
5692	237.0	2490	5965	6790
3,400.3	3,080.3	2024961	177664	8,826.3

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Consolidated Vultee Aircraft Corporation
San Diego Division

Accumulative Direct Production Hours Rpt. by Airplane
Contract AF 33(600)-5942
28 February 1955

Page 2 of 2

	Model Number	Airplane Number	Total Hours	Detail Fabrication	Detail Rework	As
Production	F-102A					
	8-10	13	6,0822	4,7131	354	
		14	5,905,9	47131	354	
		15	5,671,9	47131	354	
		16	5,496.9	4713.1	354	
		17	5449.9	47131	354	
		18	54659	47131	354	
		19	54659	47131	354	
		20	54579	4713.1	354	
		21	54659	47131	354	
		22	54739	47131	354	
		23	5450.0	47132	354	
		24	54499	47132	354	
		25	54499	47132	354	
		26	5450,0	4713.2	355.	
		27	54500	47132	355	
		28	5450.0	47132	355	
	Total Lot 2		88,636.1	75,410.2	5667	
	Total 8-10		636,1833	226,5321	14226	16
	Total Contract-5942		4,353083.3	1,167,3699	11,324.6	120

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Note #1 "Other hours"
Unal. Details
Unal. Assy
Rework of S/C Parts
Line Move
Other Program Costs
Undetermined Details
Undetermined Assy
Total Other

See Wo

emblies	Assembly Rework	Installations	Installation Rework	Other (see Note #1)
380.2	9.4	324.3	308.0	311.8
380.2	9.4	248.0	208.0	311.8
380.2	9.4	110.0	112.0	311.8
380.2	9.4	31.0	16.0	311.8
380.2	9.4			311.8
380.2	9.4	16.0		311.8
380.2	9.4	16.0		311.8
380.2	9.4	8.0		311.8
380.2	9.4	16.0		311.8
380.2	9.5	24.0		311.7
380.2	9.5			311.7
380.1	9.5			311.7
380.1	9.5			311.7
380.1	9.5			311.7
380.1	9.5			311.7
380.1	9.5			311.7
6,082.7	151.1	793.3	644.0	4988.1
9,483.0	3231.4	203,289.4	18410.4	13,814.4
8,990.3	210796.5	1468124.2	144978.6	141,499.2

Note #5

Total Airplane Report	4,353,683.3
Less Fort Worth	181,659.5
Less: S.D. Model 8-80	760,009.5
Plus: Detail shown in Note #4.	545,211.9
Plus: Other Costs Palmdale	8,310.4
Plus: Flight Test Program	17,985.2
Plus: Instrumentation	5,536.0
Total Project Target Status Report	3,988,457.8

-k Sheet

✓ See Note #4

	8-82	8-90	8-10
Production Hrs. by Airplan	1855116.3	1,100,234.2	636,183.3
Less Fort Worth	166553.5	129560	610.0
Plus: Mockup & Prootin			
Model 8 Electronics			
Static Test Parts & Tools			
Support of Tests	See Worksheet		
C.T.C Recommendations			
Common Parts 8-90			
Skewed Axis. M.L.G.			
Inspection			
Other			
Statements of Accumulated Costs	1924539.0	1250704.1	781383.1

Note # 1

Acc[illegible]. "Direct Prod. Hrs. [illegible] Airplane

"Other Hours" 28 Feb. 1955

	Total	8-80	8-82	8-90	8-10
Unal. Detail	103,780.9		49768.3	42242.0	11,770.6
Unal. Assy	2649.9		2100.3	1723.6	426.0
Rework at S/C.	2949.9	14.5	1593.9	687.6	653.9
Line Move	4439.5		3773.9	502.6	163.0
Other Prog. Costs	21894.0	8555.7	8707.6	3829.8	800.9
Undetermined Details	61.9		61.9		
" " Assy	5722.2		5722.2		
Total "Other" Hrs	141,498.3	8570.2	71728.1	47385.6	13814.4

			235,976.2	167,425.9	145,868.8

Note #4 Reconcillation
Statement of Accum. Cost by Airplane
28 February '55

	8-82 W.O.	8-82 Hrs.	8-90 W.O	8-90 Hrs.	8-10 W.O.	8-10 Hrs
Prod. Hrs by Airplane		18551163		1,100234 2 ~~11039647~~		636,1833
Less Ft. Worth		<1665535/		<129560>		<6100>
Add'l. Mockup & Proofing	5250	256714	5456	896212	5656	66,5171
	5257	557183	5457	890748	5657	65,8534
Total		813897		1786960		132,3705
Model 8 Electronics	5252	203742				
Static Test Part'l Tools	5276	275054				
Support of Test						
	5270	541	5464	726	5459	3,5272
	5271	87	5471	1119	5697(ccl2)	9,7386
	5274	8840	5475 Code 19 to 9-4	76.0		
	~~5275~~	~~1166~~				
	5290	2684	5444	.6		
	5291	1123				
	5292	576825				
	5293	236986				
Total		82,688.6		261.1		13,2658
C.T.C. Recommend.	5262	85036				
Common Parts 8-90 Transfer	5233-5200	155312		<155312>		
Shared Hrs [illegible]					5652	173.5
Inspection						
Other		<1657>				
Statement of Accum. Costs		19245390		12507041		7813831

Note # 5 Reconcilliation
Budget Project Target Status Report
28 February 1954

	Total	8-80	8-82	8-90	8-10
Total Airplane Report	4,353,083 3	761,549 5	1,855,116 3	1,100,234 2	636,183 3
Less: Fort Worth	<181,659 5>	<1,540 0>	<166,553 5>	<12,956 0>	<610 0>
: S.D. Model 8-80	<760,009 5>	<760,009 5>			
Plus: Detail in Note #4	545,211 9		235,976 2	163,425 9	145,809 8
Other Costs Palmdale	8,310 4				
Flight Test Program	17,985 2				
Instrumentation	5,536 0				
Project Target Status Report	3,988,457 8				

EYE EASE NO 5407
DL FF NO 3407

Reconcilliation
Ft. Worth Hours
Not Pick-up.

28 Feb 1955

FT. Worth Hrs on Rpt		1801195
Not.	5192	14360
	5209	129800
	5219	63960
	5693	10
		2009325
8-80		
	5101	9320
	5111	6080
		2024725
Hr Correction W.O.5612		-10
		2024715

EYE EASE NO 5402
BUFF NO 3407

Accumulative Direct Production Hourly Rpt by Airplane
Contract AF33(600)-5942
31 January 1958

Pegelotz

		Total Hours	Detail Fabrication	Detail Rework	Assemblies	Assembly Rework	Ins
Prototype YF-102							
8-80	1	3934073	1476771		1541690		87
8-80	2	3681413	1476772		1541690		62
Total 8-80		7615486	2953543	-0-	3083380	-0	149
Production YF-102A							
8-82	3	2606168	443344	7121	650901	238797	113
	4	2541161	443344	7121	650901	238797	100
	5	2462970	443344	7121	650901	238797	93
	6	2425831	443344	7121	650901	238797	89
	7	2288056	443344	7121	650901	238798	76
	8	2183273	443344	7121	650902	238798	63
	9	2068453	443344	7121	650902	238798	56
8-82	10	2052633	443346	7122	650902	238798	55
Total 8-82		18628145	3546753	56969	5207211	1910380	6489
Production F-102A							
8-90	1	2967492	733664	9972	507488	40167	145
	2	2804612	733664	9973	507488	40167	121
	3	2518901	733664	9973	507488	40167	97
	4	2291451	733664	9973	507488	40167	80
Total 8-90		10582456	2934656	39891	2029952	160668	445
Production F-102A							
8-10	1	610910	94288	478	86837	1284	41
	2	446004	94288	478	86837	1284	2
	3	346874	94288	479	86837	1284	15
	4	261162	94288	479	86837	1284	6
8-10	5	219017	94288	479	86837	1284	2
8-11	1	219673	94289	479	86837	1285	2
8-10	6	200603	94289	479	86837	1285	1
	7	197148	94289	479	86837	1285	
	8	191547	94289	479	86838	1285	
	9	191545	94289	479	86638	1285	
	10	191323	94289	[illegible]	86838	1285	
	11	188217	94289	479	86838	1285	
	12	187487	94289	479	86838	1285	
Lot 1 Total		3446500	122,525,2	672,5	112,886,6	1670,0	96,

llation	Installation Rework	Other (see Note #1)
761		42851
100		42851
861	-0-	85702
580	42970	89455
135	104408	89455
758	96593	89456
700	105512	89456
798	97638	89456
069	116583	89456
884	73548	89456
230	64780	89456
154	702032	715646
178	110323	114700
104	179515	114701
939	136969	114701
989	80469	114701
210	507276	458803
99.2	775.5	4275
88.4	1,495.8	4275
347.2	623.9	4275
551.9	848.0	4275
30.6	354.8	4275
86.4	364.4	4275
81.8	162.0	4275
10.3	88.0	4275
[illegible]	40.0	4276
357.8	80.0	4276
415.-	-	4276
[illegible]	16.0	4276
16.0	16.0	4276
471.3	4864.4	5558.0

Accumulative Direct Production Hourly Report by Airplane
Contract AF 33(600)-5942
31, January 1955

Page 2 of 2

Model Number	Airplane Number	Total Hours	Detail Fabrication	Detail Rework	Assemblies	Assembly Rework	Ins
Production F-102A							
8-10	13	32067	29499	210	870	14	
	14	32067	29499	210	870	14	
	15	32067	29499	210	870	14	
	16	32069	29500	210	870	14	
	17	32069	29500	210	870	1.4	
	18	32071	29500	211	870	15	
	19	32072	29500	211	871	15	
	20	32072	29500	211	871	15	
	21	32072	29500	211	871	15	
	22	32072	29500	211	871	15	
	23	32072	29500	211	871	15	
	24	32072	29500	211	871	15	
	25	32072	29500	211	871	15	
	26	32072	29500	211	871	15	
	27	32072	29500	211	871	15	
8-10	28	32072	29500	211	871	15	
Total Lot 2		51313.0	47,199.7	337.1	1,393.0	23.5	
Total 8-10		395,962.0	169,274.9	959.6	114,281.6	1,693.5	9
Total Contract -5942		40785717	1113270.1	106456	11463359	2087983	33

Note #1.
"Other hours" consist of the following:

Unallocated Details	975132
Unallocated Assemblies	23202
Rework of Subcontracted Parts	25710
Line Move	42435
Other Program Costs	215008
Undetermined Details	619
Undetermined Assemblies	57222
Total Other	1339328

Note #2:
Hours for Fort Worth production activity (189,398.5) are combined with San Diego hours and reported together under the applicable headings.

tallation	Installation Rework	Other (See Note 1)
		1474
		1474
		1474
		1475
		1475
		1475
		1475
		1475
		1475
		1475
		1475
		1475
		1475
		1475
		1475
		1475
		2359.7
6,421.3	4,864.4	7,912.7
97938	1257952	1339328

Note # 3

The following information relates the total production hours by airplane as shown on this report to the total Mfg. hours as reported in the Model & Statement of Accumulated Costs

	8-81	8-90	8-10
Production Hour by Airplane	18628145	10587456	395963.0
Less: Fort Worth	1745515	179290	278.0
Plus: Mockup & Proofing	81,366.7	178,258.4	117,533.2 (5656 & 5657)
Model & Electronics	17,084.3		
Static Test Parts & Tools	27,505.4		
Support of Tests	83,225.6	1922.6	12,592.8 (5697 5459) (-0010)
C.T.C. Recommendations	8503.6		
Common Parts F-90	15531.2	<15,521.2>	
Skewed Axis Main Landing Gear			171.0
Inspection	343.7	5322.2	10,352.1
Others	<45.5>	41.5	
Statement of Accumulated Costs	1,921,778.0	1,215,330.1	536,334.1

Note #4

Detail and assembly totals include hours for the manufacture of parts based on original schedules, beyond present [illegible].

Reconcilliation Accumulated Costs
Airplane Hours Report
January 31, 1955

W.O. #	8-82
Report	1,862,814.5
Less F.W.	174,551.5
5250	25,648.4
5257	55,718.3
5252	17,084.3
5270	11.1
5271	8.7
5272	27,505.4
5274	170.0
~~5275~~	~~1294.0~~
5290	268.4
5291	112.3
5292	57,682.5
5293	23,678.6
5262	8503.6
5200	13,837.6
5233	1,693.6
Inspection	343.7
Total	1,921,823.5

EYE-EASE NO 9407
BUFF NO 3407

CONVAIR – SAN DIEGO **AVOID VERBAL ORDERS**

TO R. Knapp DEPT. DATE 8-6-57

Please provide Billing Section with total value of Ground Handling equipment thru July 31, 1957, and monthly totals thereafter on all Model 8 Contracts.

This information should be provided as soon as possible after month end, but no later than the 10th of the following month.

Including G.O. Overhead
not Including "un Reimbursable" (un Billable)

Thomas Flanagan

SIGNED: Thomas Flanagan, Asst. Billing Sup.

DEPT. & FUNCT.	ROOM	COL/STA	FLOOR	BLDG.	PLANT	PHONE
Billing	515		5	19	1	1220

FORM 1008-D (SHOW YOUR COMPLETE ADDRESS & PHONE)

CONVAIR – SAN DIEGO **AVOID VERBAL ORDERS**

TO R. Trapp DEPT. DATE 8-6-57

Please provide Billing Section with total value of Ground Handling equipment thru July 31, 1957, and monthly totals thereafter on all Model 8 Contracts.

This information should be provided as soon as possible after month end, but no later than the 10th of the following month.

Including G.O. Over Head

Does not Include un billable

SIGNED:	DEPT. & FUNCT.	ROOM	COL/STA	FLOOR	BLDG.	PLANT	PHONE
Thomas Flanagan, Asst. Billing Sup.	Billing	515		5	19	1	627 1220

FORM 1008-D (SHOW YOUR COMPLETE ADDRESS & PHONE)

CONVAIR-SAN DIEGO **AVOID VERBAL ORDERS**

TO T. Flanagan DEPT. 91-0 DATE 15 April 1958

Total costs of Ground Handling Equipment through February 1958 and March 1958 are as follows:

Contract	February	March
AF 33(600)-5942	$ 3,553,423.09	$ 3,782,618.62
AF 33(600)-23903	5,160,680.99	5,227,865.39
AF 33(600)-29264	7,101,440.09	7,189,805.74
AF 33(600)-30169	3,107,693.95	3,367,214.36
AF 33(600)-31174	22,547,736.30	22,932,470.08
AF 33(600)-33695	157,092.22	247,170.98
AF 33(600)-33808	10,798.94	46,300.23
Total	$41,638,865.58	$42,793,445.40

SIGNED:	DEPT. & FUNCT.	LOCATION ROOM	COL/STA	BLDG.	PLANT	PHONE
R. E. Trapp	93-6	115		4	II	564

FORM-1008-C (SHOW YOUR COMPLETE ADDRESS & PHONE)

CONVAIR-SAN DIEGO **AVOID VERBAL ORDERS**

TO T. FLANAGAN DEPT. 91-0 DATE 15 APRIL 1958

TOTAL COSTS OF GROUND HANDLING EQUIPMENT THRU FEBRUARY 1958 & MARCH 1958 ARE AS FOLLOWS:

CONTRACT	FEBRUARY	MARCH
AF 33(600) 5942	$3,553,423.09	$3,782,618.62
23903	5,160,680.99	5,227,865.39
29264	7,101,440.09	7,189,805.74
30169	3,107,693.95	3,367,214.36
31174	22,547,736.30	22,932,470.08
33695	157,092.22	247,170.98
33808	10,798.94	46,300.23
TOTAL	$41,638,865.58	$42,793,445.40

SIGNED:	DEPT. & FUNCT.	ROOM	COL/STA	BLDG.	PLANT	PHONE
R. E. TRAPP	93-6	115		4	II	564

FORM-1008-C (SHOW YOUR COMPLETE ADDRESS & PHONE)

JANUARY						1957
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Friday

18

January

	Feb.	March
23903	5,160,680.99	5,227,865.39
30169	3,107,693.95	3,367,214.36
33808	10,798.94	46,300.23

CONVAIR – SAN DIEGO **AVOID VERBAL ORDERS**

TO T. Flanagan DEPT. 91-0 DATE 18 February 1958

Total value of Ground Handling Equipment thru Dec. 1957 and Jan. 1958 on Model 8 Contracts is as follows:

	December	January
AF 33(600)-5942	$ 3,496,284.33	$ 3,496,859.63
-23903	5,018,150.84	5,090,959.31
-29264	6,973,067.47	7,060,071.51
-30169	2,750,769.43	2,881,721.21
-31174	21,845,518.74	22,129,226.93
-33695	103,396.86	113,429.96
-33808	280.08	306.11
Total	$40,187,467.75	$40,772,574.66

SIGNED: R. E. Trapp R. E. Trapp

DEPT. & FUNCT.	ROOM	COL/STA	FLOOR	BLDG.	PLANT	PHONE
93-6	115		1	4	II	564

FORM 1008-D (SHOW YOUR COMPLETE ADDRESS & PHONE)

CONVAIR–SAN DIEGO **AVOID VERBAL ORDERS**

TO T. Flanagan DEPT. 91-0 DATE 2 January 1957

Total value of Ground Handling Equipment thru 30 Nov. 1957 on Model 8 Contracts is as follows:

AF 33(600)-5942	$ 3,462,910.85
-23903	4,598,644.39
-29264	6,873,300.27
-30169	2,384,067.52
-31174	20,436,613.04
-33695	65,106.84
-33808	263.59
	$37,820,906.50

SIGNED	DEPT. & FUNCT.	LOCATION: ROOM	COL/STA	FLOOR	BLDG.	PLANT	PHONE
R. E. Trapp R.E.T.	93-6	115		1	4	II	564

FORM 1008-D (SHOW YOUR COMPLETE ADDRESS & PHONE)

CONVAIR—SAN DIEGO **AVOID VERBAL ORDERS**

TO T.Flanagan DEPT. 91-0 DATE 22 November 1957

Total value of Ground Handling Equipment thru 31 October 1957 on Model 8 Contracts is as follows:

Contract	Amount
AF 33(600)-5942	$ 3,385,646.92
23903	4,570,137.08
29264	6,804,956.86
30169	2,099,703.98
31174	19,063,170.67
33695	17,742.22
	$ 35,941,357.73

SIGNED	DEPT. & FUNCT.	ROOM	COL/STA	FLOOR	BLDG.	PLANT	PHONE
R. E. Trapp R E Trapp	93-60	115			4	II	564

FORM 1008-D (SHOW YOUR COMPLETE ADDRESS & PHONE)

CONVAIR-SAN DIEGO **AVOID VERBAL ORDERS**

TO T. FLANAGAN DEPT. 91-0 DATE 17 OCTOBER 1957

TOTAL VALUE OF GROUND HANDLING EQUIPMENT THRU 30 SEPTEMBER 1957 ON MODEL 8 CONTRACTS, IS AS FOLLOWS:

CONTRACT	AMOUNT
AF 33 (600) 5942	$ 3,368,821.60
" " 23903	4,513,645.79
" " 29264	6,537,443.85
" " 30169	1,962,975.08
" " 31174	15,730,052.22
" " 33695	13,679.32
	$ 32,126,617.86

Hand delivered By Lee 10/17/57

SIGNED:	DEPT. & FUNCT.	LOCATION ROOM	COL/STA	BLDG.	PLANT	PHONE
R.E. TRAPP	93-6	115		4	II	564

FORM-1008-C (SHOW YOUR COMPLETE ADDRESS & PHONE)

CONVAIR – SAN DIEGO **AVOID VERBAL ORDERS**

TO T. Flanagan DEPT. 91-0 DATE 12 September 1957

Total value of Ground Handling Equipment thru 31 August 1957 on Model 8 Contracts, is as follows:

CONTRACT	AMOUNT
AF 33(600)-5942	$ 3,335,575.04
AF 33(600)-23903	4,445,049.53
AF 33(600)-29264	6,227,101.44
AF 33(600)-30169	1,821,557.94
AF 33(600)-31174	12,754,093.22
AF 33(600)-33695	~~8.88~~
Total	~~$28,583,286.05~~

SIGNED: R. E. Trapp R. E. Trapp

DEPT. & FUNCT. 93-6

LOCATION: ROOM 115 COL/STA FLOOR 1 BLDG. 4 PLANT II

PHONE 730

FORM 1006-D (SHOW YOUR COMPLETE ADDRESS & PHONE)

CONVAIR – SAN DIEGO **AVOID VERBAL ORDERS**

TO T. FLANAGAN DEPT. 91-0 DATE 8-20-59

TOTAL VALUE OF GROUND HANDLING EQUIPMENT THRU JULY 31, 1957 ON ~~[illegible]~~ MODEL 8 CONTRACTS, IS AS FOLLOWS:

CONTRACT	AMOUNT
AF 33(600) 5942	3,285,572.54
AF 33(600) 23903	4,348,681.95
AF 33(600) 29264	5,917,889.88
AF 33(600) 30169	1,661,478.31
AF 33(600) 31174	9,793,106.22
AF 33(600) 33695	8.83
TOTAL	25,006,737.73

SIGNED: R.F. TRAPP

DEPT. & FUNCT. 93-6

LOCATION					
ROOM	COL/STA	FLOOR	BLDG.	PLANT	PHONE
19.5		1	4	2	564

FORM 1008-D (SHOW YOUR COMPLETE ADDRESS & PHONE)

S.H.E. Totals from July 1957
Statement of accum. Costs,
for Hugh Kayes AVB Dated 8-6-57

	INCLUDING G.O. OVHEAD CUMULATIVE THRU 31 July 1957*		EXCLUDING G.O. OVHD.	S.D.	G.O. OVERHEAD FTW.	~~Renard~~
5942	3285572 54		3258465 13	27107 41		
23903	4348681 95		4338860 51	9821 44	~~-0-~~	~~-0-~~
29264	5917889 88		5916013 41	1876 42		
30169	1661478 31		1642645 29	18397 79	also includes 435.25 unbillable	
31174	9793106 22		9775332 91	17773 68		
33695	8 83		8 47	36		
33808						
	25006737 73		24931325 33	74977 15		

* cut-off dates
Labor - 21 July 1957
material 21 July 1957

[illegible] Information Bulletin
Report No.: ZN-[illegible]-131
Model 8 Airplane

JF-106A/B ACCELERATED DEVELOPME

Contract No. AF33(600)-30169

Case XIV Wing Camber

Case XXIX Wing Camber

Complete Armament Configuration

* ITEM NO.	* MODEL, VERSION, & NO.	* ARMT. CONFIG.	* MA-1 AWCS CONFIG	AIR FORCE SERIAL NO.	FLIGHT TEST PROGRAM ASSIGNMENT	FLIGHT TEST PROGRAM MONTHS	TEST AGENCIES	TEST FACILITY
	PROTOTYPE: F-106A S/N (with YJ75-P-1 engines & Dec. 1957 retrofit of P-9 in S/N 452)							
1	8-20-1	N	N	56-451	Ph. I,II,III/Barrier Engagement	18/11½	CONVAIR(CV)	EAFB
2	-2	N	N	Ⓐ -452	Phase I,II,III Power Plant/P&W	26/8¾	CV/P&W	EAFB
	PRODUCTION: JF-106A S/N (with J75-P-9 or P-17 engines)							
3	8-21-1	S	S	56-453	Flight Control System Development	13¾	CONVAIR	EAFB
4	-2	S	PP	-454	MA-1, AFCS	21	HAC	CC/Palmdale
5	-3	S	S	-455	Flight Loads	15	CONVAIR	EAFB
6	-4	S	S	-456	Stability Derivatives/Antennas	12¾	CONVAIR	EAFB
7	8-22-1		PP	-457	MA-1 System Development	20	HAC	CC/Palmdale
8	-2		S	-458	Armament Separation & Ballistics	18½	CONVAIR	HAFB
9	-3		S	Ⓐ -459⊛	J75-P-17 Systems/Prod. Support	17/2¾	CONVAIR	EAFB
10	-4		S	-460⊛	Armament Separation & Ballistics	19¾	CONVAIR	HAFB
11	-5		S	-461	J75 Engine Development	15½	P&W	EAFB
12	-6		S	-462	Center Stick Eval./Stab. & Phase IV Control	5/5	CV/AFFTC	EAFB
13	8-23-1		PP	-463	Falcon Missile Development	28	HAC	CC/HAFB
14	****-2		PP	-464	AWCS & Armament Development (AAD)	24¼	CV(Joint)	CC/HAFB
15	****-3		PP	-465	AWCS & Armament Development (AAD)	24	CV(Joint)	CC/HAFB
16	-4		PP	-466	Phase V Climatic & Antennas, C&N	18	WADC	Eglin/WPAFB/Eielson
17	8-22-7		S	Ⓐ -467⊛	CV Checkout & Mod./Phase IV Perf.	3½/12	CV/AFFTC	EAFB
18	~~8-23-5~~		PP	~~57-229~~	Joint ARDC-ADC Category II	8¼	AFFTC	EAFB
19	-6		S	Ⓐ -230	Case XXIX Eval. & Adverse Weather	12¾	CONVAIR	EAFB
20	-7		PP	-231	Joint ARDC-ADC Category II/AAD Support	5½/13	AFFTC/CV (Joint)	EAFB/HAFB
21	8-24-1		P	-232	Air Conditioning	7½	CONVAIR	EAFB
22	****-2		P	-233⊛	AWCS & Armament Development (AAD)	21½	CV(Joint)	HAFB
23	-3		P	-234	MCC & ARDC-ADC Cat. II/Climatic	9/7	AFFTC/WADC	EAFB/Eglin
24	-4		P	-235	NASA-AFCS Development	16	NASA Ames Lab	Moffett Fld
25	-5		P	-236	Joint ARDC-ADC Category II	7	AFFTC	EAFB
26	-6		P	-237	" " " " "	7	"	"
27	-7		P	-238	" " " " "	9	"	"
28	***-8		S	YF-106C 239⊛	40" Dish Gloved Nose	3¼ -	CONVAIR	"
29	***-9		PP(40")	240⊛	40" Dish Radar Antenna Sys. Dev.	1½	HAC	Palmdale
30	-10		P	-241⊛	Joint ARDC-ADC Cat. II/GAR-3A/4A Dev.	21¼	AFFTC/HAC	EAFB/HAFB
31	~~-11~~		P	~~-242~~⊛	--Crashed 10/27/58 --	---	------	----
32	***-12		P	-243⊛	Category II/AAD Program	6½/11¼	AFFTC/CV (Joint)	EAFB/HAFB
33	-13		P	Ⓐ -244⊛	Category II/SAGE Integration	2/14	" /AFCRC	"/Hanscom
34	-14		P	Ⓐ -245⊛	" " / " "	3/13¼	" / "	" / "
			AN/ASQ-25	JF-106B S/N	See Part II,A of attached cover letter on CONVAIR test months			
1	8-27-1		S	57-2507	Phase I, II, III/Aft Eject. Test	14/7½	CONVAIR	EAFB
2	-2		P	-2508	AN/ASQ-25 Development	15⅓	HAC	Palmdale
3	-3		S	-2509⊛	Ramp Opt./Phase IV Perf. & Stab. Control	2/11	CV/AFFTC	EAFB
4	-4		P	-2510	Phase I & III/WADC	5¾/9	CONVAIR/AF	EAFB/Dayton
5	~~-5~~		P	~~-2511~~	Armt. Sep. & Ballistics	3	CONVAIR	HAFB
6/7	-6/7		P	2512/2513	Joint ARDC-ADC Category II	13/7	AFFTC	EAFB
8	-8		P	-2514	Armt. Sep. & Ballistics	2¼/4¼	CONVAIR	SD/HAFB
9	-11		P	Ⓐ -2517⊛	AAD Program (MB-1 Firing Demon.)	1¼	CV (Joint)	HAFB

XIV

Case XXIX

AF33(600)-33800

ABBREVIATION DEFINITIONS:
MA-1 Sys. - for JF-106A; MA-1/40 - for S/N 240
AN/ASQ-25 - for JF-106B
AWCS-Aircraft & Weapon Control System
AFCS-Automatic Flight Control System.
N -No Provisions for Installation or Retrofit.
S -Space and Structural Provisions only.
PP -Pre-Production AWCS Installed (STO MA-1).
P -Production " "
CV(Joint)-CONVAIR participation with tests under cognizance of the Director of Combined Systems and his Joint Test Staff.
MCC - Modified Close Control Tests.
CC - Culver City
SD - San Diego

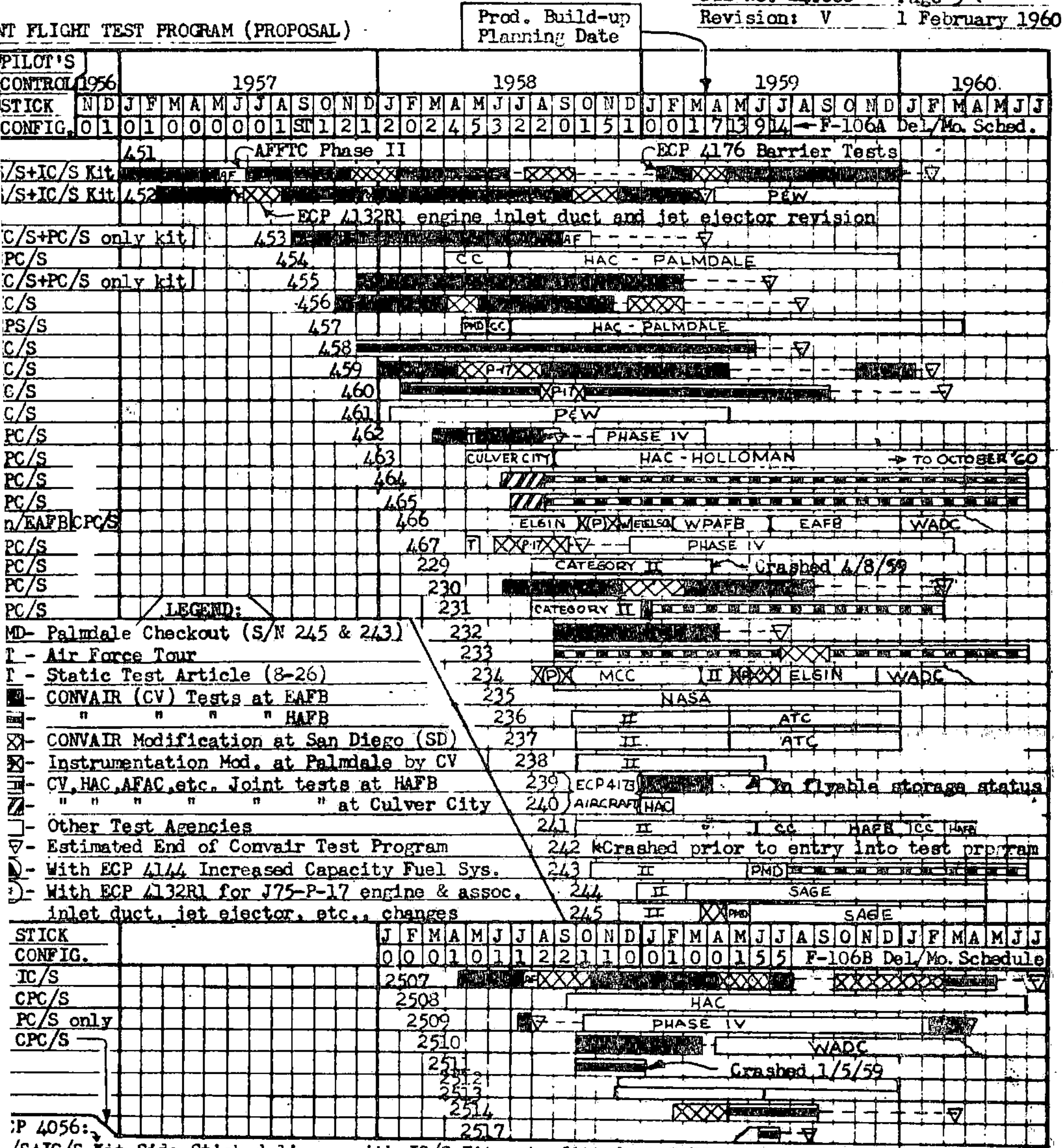
* REF only-See DIB 9.007 & 3.001 for current release info.

** NOS shown are not CONVAIR Production Line Sequence NOS.

*** YF-106C S/N 239 & 240 Flight Testing under Contract AF33(600)-36714.

**** Covers 20 months AAD extension for 4 aircraft under Contract No. AF33(600)-40599

NT FLIGHT TEST PROGRAM (PROPOSAL)



/S+IC/S Kit-Side Stick delivery with IC/S Kit retrofitted at EAFB during test program.

C/S -Interim Center Stick (single-headed).

PC/S -Complete Production Yoke Center Stick config. (Includes redesigned rudder pedal mechanism, prov. for 8" HSI, & new consoles.

C/S only -Production Center Yoke Stick only.

uantity/Month of F-106's assigned to EAFB & HAFB Convair Test Programs (Includes months in San iego modification, AAD Program (except at Culver City), & thru "estimated" completion dates):

At EAFB	1	1	2	2	2	2	2	2	3	3	4	5	6	6	7	8	8	9	10	10	10	10	10	10	11	11	11	8	7	7	5	4	4	4	4	4	3	2	2	0	0	0	0
At HAFB	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	2	2	2	2	4	5	6	6	6	6	7	7	7	7	8	9	8	7	7	7	7	7	7	5	5	5	5	0
Month	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J
Year	1957												1958												1959												1960						

Program Bars begin with each aircraft's acceptance date.

PROPOSED F-102 ACCELERATED DEVELOPMENT TEST PROGRAM (Contract No. AF33(600)-5942 — 5.

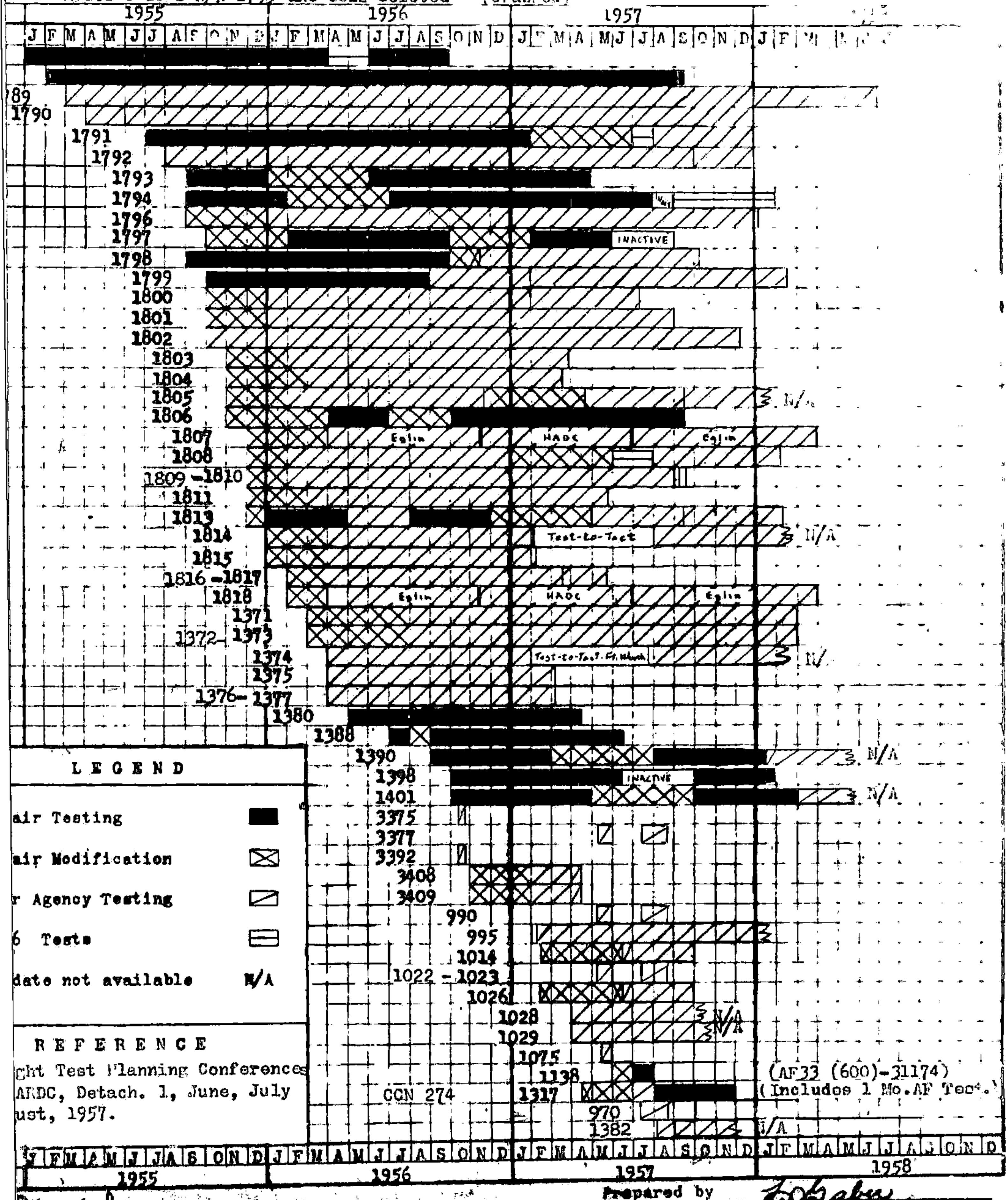
AF SERIAL NUMBER	MODEL VERSION NUMBER	TASK ASSIGNMENT	CONVAIR TEST MAINT. MONTHS		TEST AGENCY	NOTE
			CONTRACT	EST		
53-1787	8-90-1	Phase I, II, III,/AFCS Development	[illegible]	19	Convair/AFFTC	1787
-1788	-2	Armament/Photo Test Support	23	31½	Convair	1788
-1789	-3	MA-1 Test			HAC	1
-1790	-4	MA-1 Test			HAC	
-1791	8-10-1	Phase I, II, III/WADC Cockpit Display	14.	19	Convair/WADC	
-1792	-2	MG-2 Test, AILAS, Prod. Improvement			HAC	
-1793	-3	Armament	12	15	Convair	
-1794	-4	Flight Loads/F-106A "g" Limiters/Antenna	16	19	Convair	
-1796	-6	Phase IV			AFFTC	
-1797	-7	Armament-MB-1 (Extension)	11	15	Convair	
-1798	-8	Antenna/Controls/Navaho	14	13	Convair/NAA	
-1799	-9	Complete Systems Evaluation/Armament	9	11	Convair/HAC	
-1800	-10	Phase VI / Barrier Test			AFFTC	
-1801	-11	Phase VI			AFFTC	
-1802	-12	Climatic Tests			WADC	
-1803	-13	Phase VI			AFFTC	
-1804	-14	Phase V			WADC	
-1805	-15	Phase VI/HAC Cockpit Display			AFFTC/HAC/WADC	
-1806	-16	Armament-MB-1 (Ejection)	8	14½	Convair	
-1807	-17	Armament, MG-3/Matador Firing-Gar-1, -1D			AFAC/AFAC@HADC	
-1808	-18	Phase VI/WADC Cockpit Display			AFFTC/CV/WADC	
-1809, 1810	-19, 20	Phase VII			APGC	
-1811	-21	Phase VII			APGC	
-1813	-23	Large Tail/Side Stick/HAC Cockpit Display	8	8	CV/AF/HAC/WADC	
-1814	-24	Phase VII			APGC	
-1815	-25	Phase VII			APGC	
-1816, 1817	-26, 27	Phase VII			APGC	
53-1818	-28	Armament/Matador-GAR-1 & -1D, 2.75" FFAR			AFAC/AFAC@HADC	
54-1371	-29	SAGE Integration			AFCRC	
-1372, 1373	-30, 31	SAGE Integration			AFCRC	
-1374	-32	NACA Tests			NACA	
-1375	-33	01-Z Training			ATRC	
-1376, 1377	-34, 35	Phase VII			APGC	
-1380	-38	Power Plant Development	8	11¼	Convair	
-1388	-46	All-Weather, Hydraulics	6	10½	Convair	
-1390	-48	Stab. & Control, Spec. Conf. Verif.	10	11¼	Convair/AFAC	
-1398	-56	Struct. Demon./Ext. Tanks/ MLG Loads	7	16	Convair	
54-1401	-59	Spins, Snap-up Techniques	12	12	Convair/AFAC	
-3375	-84	Quality Control Firings			@ APGC	Con
-3377	-86	Tactical Evaluation			ADC @ APGC	
-3392	-101	Quality Control Firings			@ APGC	Con
55-3408	-117	Armament/Matador Firing-GAR-1D & -2			AFFTC @ HADC	
-3409	-118	Armament/Matador Firing-GAR-1D & -2			AFFTC @ HADC	Othe
56- 990	-207	Tactical Evaluation			ADC @ APGC	
56- 995	-212	Armament-GAR-3, -4			HAC	F-1
-1014	-231	Phase VII, GAR-2 & Weapons System			APGC	
-1022, 1023	-239, 240	Tactical Evaluation			ADC @ APGC	End
-1026	-243	Phase VII, GAR-2 & Weapons System			APGC	
-1028	-245	Armament-2.75" FFAR, Matador			AFAC/AFAC@HADC	
-1029	-246	Armament-2.75" FFAR, Matador			AFAC/AFAC@HADC	
-1075	-292	Tactical Evaluation			ADC @ APGC	
-1138	-355	Tacan			Convair	1. Fl
-1317	-534	Case XX Wing	5	5	Convair/AFFTC	at
- 970	-187	Phase VII, GAR-2 & Weapons System			ADC @ APGC	Au
54-1382	- 40	Tactical Evaluation			APGC	
		(Model 8-80 and 8-82 Maint. Mo. Totals)	71	72		
		TOTAL	253	303½	← See NOTE	

ENGINEERING FLIGHT TEST

MODEL 8 PROJECT ENGINEER

A. #88 dtd 9 Aug. 1956 & noted)   DIB 24.005 Revised 13 Sept.

: 1. Model 8-80 and 8-82 Test aircraft not shown.—See 1 December 19
  2. Model 8-10's S/N 1795 and 1812 deleted---(crashed)



LEGEND

air Testing	■
air Modification	☒
r Agency Testing	▨
6 Tests	⊟
date not available	N/A

REFERENCE

ght Test Planning Conferences ARDC, Detach. 1, June, July ust, 1957.

Prepared by

F-102A ACCELERATED DEVELOPMENT TEST PROGRAM Contract AF33(600)29

[illegible]	MODEL NO	A/C S/N	TASK ASSIGNMENT	CONVAIR TEST MAINT. MONTHS CONTRACT	EST	TEST AGENCY	1955 O	N	D	J	F	M
1	8-12	1351	Phase I, II, III	13	12	Convair/EAFB		■	■	■	■	■
[illegible]	8-12	1352	Fire Control			HAC						
[illegible]	8-12	1353	Buffet, Roll Coupling/Phase IV	5	4	Convair & AFFTC				1353		
[illegible]	8-12	1354	Armament	9	10	Convair						
[illegible]	8-12	1355	Phase VI	[illegible]		AFFTC						
11	8-12	1361	Structural Demon., Phase III & IV	5	10	Convair/AFFTC						
12	8-12	1362	Spins, Stability & Control	8	7	Convair/EAFB						
*40	8-12	4051	External Tanks		½	Convair/EAFB						

Convair

Other A

Convair

End Dat

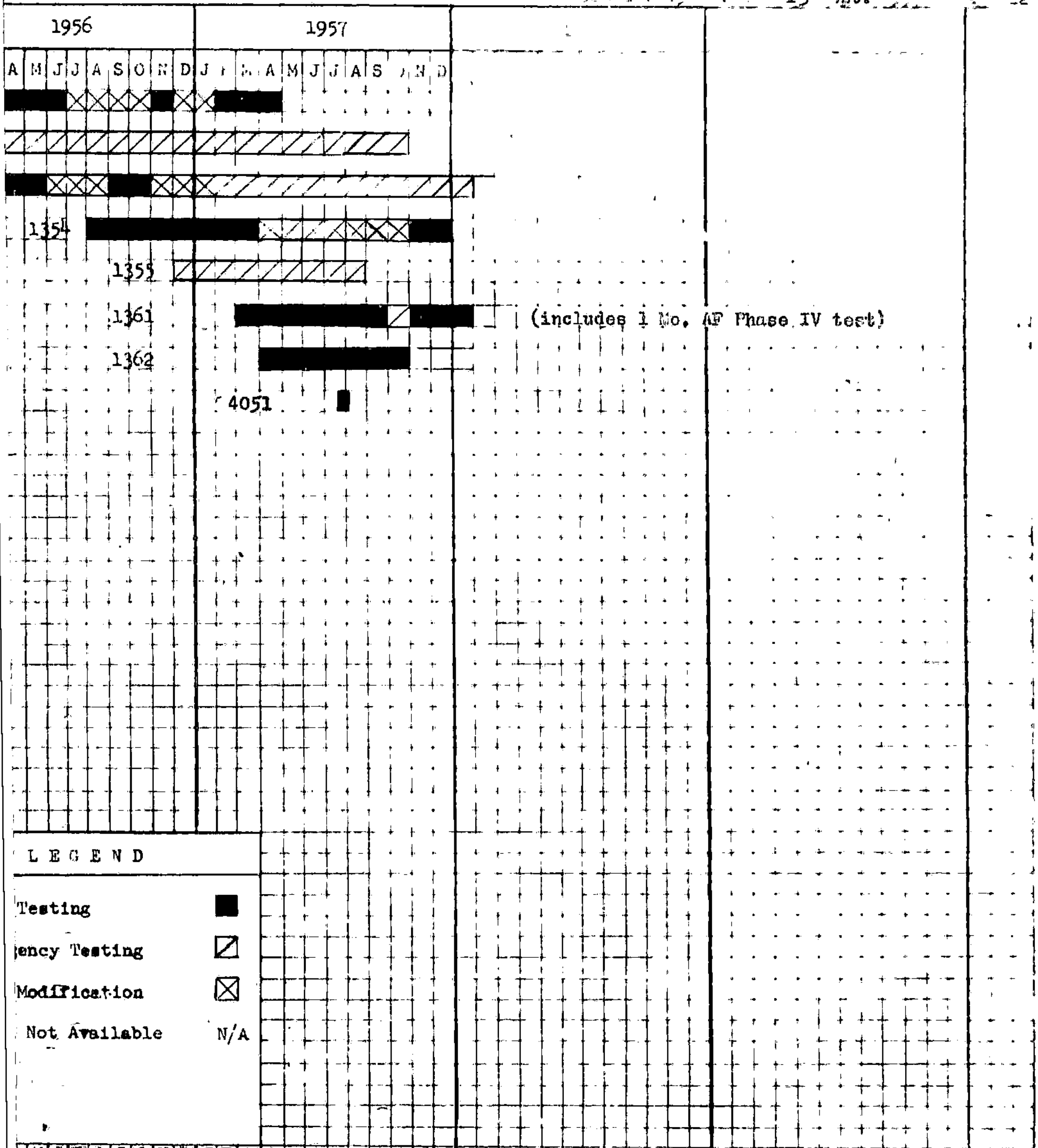
REF: 1. [illegible] 2

2. *S.O. [illegible] 1-713 dtd 3 June 1957

TOTAL	40	43½	← See NOTE	O	N	D	J	F	M
Convair TF-102A's at EAFB -					1	1	1	1	1
Convair TF-102A's at EAFB -									

ENGINEERING FLIGHT TEST

MODEL 8 PROJECT OFFICE



(	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M
2	2	1	0	0	1	1	1	0	0	1	2	3	2	2	3	2	2	2																													
				1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	2	2	2	1																									

LJG

CONVAIR - Pomona 1 January 1957

CODE NUMBERS FOR ALL FIXED PRICE CONTRACTS

FEB 14 1957

NO.	CONTRACT	A.W.O.
700	11297 (Program I)	1500-1501-1570-1590-1591-1592-1593
702	11297 (Program III)	1700-1709-1712-1713-1714-1715-1730-1745-1750 1760-1771-1776-1777-1778-1783-1795-1798
704	11297 (Program IV)	1791-1792-1793
705	16346	All 2400 Series and 1519
706	17426	All 3100 Series
754	R.E.A.'s	All 2000 Series
800	R.E.A.'s	All 2100 Series
500	NOnr 1468 (00)	1920-1945
506	SC 70093	1941
507	16247	1988-1999
521	17035	1968-1969-1970
524	17106	1974-1975-1976-1977-1978
526	To Be Assigned	1980-1981
527	17239	1982
529	N 195-8680	1984
531	N 195-9203	1986
532	N 123 (60530) 9704A	1987
536	N 195-8901	1993
538	G 4902-56	1996
539	P.O. 5409	1997
650	1956-S.D. Costs	1965
651	P.O. 319400 S.D.	1901-1902-1903-1904-1905-1906-1927 1954-1955-1957-1958
652	P.O. 319400 S.D.	5000-5030-5032-5040-5049-5101-5130 5191-5281-5390-5446
653	P.O. 319400 S.D.	6000-6001-6002-6003-6004-6011-6012-6013-6014-6032- 6040-6049-6446-6711-6895
654	P.O. 319400 S.D.	8000-8001-8002-8003-8004-8005-8006-8007-8008-8010-8011 8012-8013-8014-8015-8016-8017-8018-8032-8049-8446-8711 8895
655	P.O. 319400 S.D.	1928
656	P.O. 319400 S.D.	3901-3902-3911-3912
657	P.O. 319400 S.D.	2301-2302-2303
660	1957 S. D. Costs	1995
998	Variance Account	1998
997	Computer Costs	1991-1992
598	Labor Accrual	1900
999	Shipping Material	1922

CODE NUMBERS FOR ELEMENTS

0. Hours
1. Labor
2. Overtime Premium
4. Raw Material & Purchased Parts
5. Material Other Costs
6. Other Direct Charges
7. Vendor Tooling
8. Inter-Division Invoices Re

CODE NUMBERS FOR BURDEN CENTER

1. Factory
2. Engineering
3. Tool Engineering
4. Tool Manufacture
5. Experimental
6. Miscellaneous
7. Quality Control
8. Shipping
9. Transfers from Other Divisions

NOV 20 1957

C O N V A I R
A Division of General Dynamics Corporation
SAN DIEGO AND POMONA DIVISION WORK ORDER CROSS REFERENCE LIST
AS OF 14 November 1957

SAN DIEGO			POMONA			
Contract and/or Sales Order	A.W.O.	Work-In Process Account	Contract and/or Purchase Order	Code Number	A.W.O.	Work-In Process Account
-	-	-	P.O. 319400	150	1866	136
AF 33(600)5942	5195	136	P.O. 319400	151	7195	136
"	5209	"	"	"	7209	"
"	5219	"	"	"	7219	"
"	5551	"	"	"	7551	"
"	5639	"	"	"	7639	"
"	5653	"	"	"	7653	"
AF 33(600)30169	17001	136	P.O. 319400	157	4001	136
"	17002	"	"	"	4002	"
"	17003	"	"	"	4003	"
"	17004	"	"	"	4004	"
"	17005	"	"	"	4005	"
"	17006	"	"	"	4006	"
"	17007	"	"	"	4007	"
"	17071	"	"	"	4071	"
"	17201	"	"	"	4201	"
"	17290	"	"	"	4290	"
"	17701	"	"	"	4701	"
"	17702	"	"	"	4702	"
"	17703	"	"	"	4703	"
S.O. 704938	593	136	P.O. 319400	159	7959	136
-	-	-	P.O. 319400	650	1965	137
AF 41(608)7300	53663	137	P.O. 319400	651	1901	137
"	53672	"	"	"	1902	"
"	53675	"	"	"	1903	"
"	685	"	"	"	1904	"
"	5772	"	"	"	1905	"
"	5781	"	"	"	1906	"
"	5762	"	"	"	1907	"
"	5727	"	"	"	1927	"
"	5703	"	"	"	1954	"
"	53637	"	"	"	1955	"
"	53633	"	"	"	1957	"
"	53638	"	"	"	1958	"
AF 33(600)23903	1500-0	137	P.O. 319400	652	5000	137
"	1503-0	"	"	"	5030	"
"	1509-1	"	"	"	5032	"
"	1509-2	"	"	"	5032	"
"	1504-0	"	"	"	5040	"

San Diego and Pomona Division
Work Order Cross Reference List
As of 14 November 1957.

SAN DIEGO			POMONA			
Contract and/or Sales Order	A.W.O.	Work-In Process Account	Contract and/or Purchase Order	Code Number	A.W.O.	Work-In Process Account
AF 33(600)23903	1549-1	137	P.O. 319400	652	5049	137
"	1549-2	"	"	"	5049	"
"	1510-1	"	"	"	5101	"
"	1513-0	"	"	"	5130	"
"	1519-1	"	"	"	5191	"
"	1519-2	"	"	"	5191	"
"	1528-1	"	"	"	5281	"
"	1539-0	"	"	"	5390	"
"	1546	"	"	"	5446	"
AF 33(600)29264	16000	137	P.O. 319400	653	6000	137
"	16001	"	"	"	6001	"
"	16002	"	"	"	6002	"
"	16003	"	"	"	6003	"
"	16004	"	"	"	6004	"
"	16011	"	"	"	6011	"
"	16012	"	"	"	6012	"
"	16013	"	"	"	6013	"
"	16014	"	"	"	6014	"
"	16701	"	"	"	6032	"
"	16040	"	"	"	6040	"
"	16049	"	"	"	6049	"
"	16446	"	"	"	6446	"
"	16711	"	"	"	6711	"
"	16895	"	"	"	6895	"
AF 33(600)31174	18000	137	P.O. 319400	654	8000	137
"	18001	"	"	"	8001	"
"	18002	"	"	"	8002	"
"	18003	"	"	"	8003	"
"	18004	"	"	"	8004	"
"	18005	"	"	"	8005	"
"	18006	"	"	"	8006	"
"	18007	"	"	"	8007	"
"	18008	"	"	"	8008	"
"	18010	"	"	"	8010	"
"	18011	"	"	"	8011	"
"	18012	"	"	"	8012	"
"	18013	"	"	"	8013	"
"	18014	"	"	"	8014	"
"	18015	"	"	"	8015	"
"	18016	"	"	"	8016	"
"	18017	"	"	"	8017	"
"	18018	"	"	"	8018	"
"	18701	"	"	"	8032	"
"	18049	"	"	"	8049	"
"	18075	"	"	"	8075	"
"	18128	"	"	"	8128	"

San Diego and Pomona Division
Work Order Cross Reference List
As of 14 November 1957

SAN DIEGO			POMONA			
Contract and/or Sales Order	A.W.O.	Work-In Process Account	Contract and/or Purchase Order	Code Number	A.W.O.	Work-In Process Account
AF 33(600)31174	18446	137	P.O. 319400	654	8446	137
"	18711	"	"	"	8711	"
"	18760	"	"	"	8760	"
"	18895	"	"	"	8895	"
S.O. 704-1092	53683	137	P.O. 319400	655	1928	137
AF 33(600)33659	20001	137	P.O. 319400	656	3901	137
"	20002	"	"	"	3902	"
"	20011	"	"	"	3911	"
"	20012	"	"	"	3912	"
"	20711	"	"	"	3913	"
AF 41(608)7768	682	137	P.O. 319400	657	2301	137
"	2300	"	"	"	2302	"
"	2317	"	"	"	2303	"
"	2325	"	"	"	2304	"
"	2379	"	"	"	2305	"
"	2404	"	"	"	2306	"
AF 33(600)33808	19101	137	P.O. 319400	658	9101	137
"	19102	"	"	"	9102	"
"	19103	"	"	"	9103	"
"	19201	"	"	"	9201	"
"	19202	"	"	"	9202	"
"	19203	"	"	"	9203	"
AF 33(600)29960	285	135	P.O. 319400	659	2850	137
--	--	--	P.O. 319400	660	1995	137
--	--	--	P.O. 505330	685	3013	137
AF 41(600)7769	664	135	P.O. 505330	686	1175	137
Commercial	53635	137	P.O. 505330	687	1180	137
"	53674	"	"	"	1181	"
"	53728	"	"	"	1182	"
"	80141	"	"	"	1183	"
"	80142	"	"	"	1184	"
"	80143	"	"	"	1185	"
"	80144	"	"	"	1186	"
"	80145	"	"	"	1187	"
"	80146	"	"	"	1188	"
"	80147	"	"	"	1189	"

San Diego and Pomona Division
Work Order Cross Reference List
As of 14 November 1957

SAN DIEGO			POMONA			
Contract and/or Sales Order	A.W.O.	Work-in Process Account	Contract and/or Purchase Order	Code Number	A.W.O.	Work-in Process Account
Commercial	30064	137	P.O. 526622	680	3020	137
Commercial	30000	137	P.O. 526622	681	3024	137
--	---	---	P.O. 526622	682	3025	137
Commercial	30001	137	P.O. 526622	683	1150	137
"	30582	"	"	"	1151	"

NOTE: This Cross Reference List of San Diego Division and Pomona Division Work Orders supersedes all previous lists issued. The list is sequenced according to Pomona Division purchase orders, code number and accounting work order.

C. A. Benak
Supervisor of Cost Accounting

Issued By: Convair-Pomona Division
Industrial Accounting Department
Cost Section 18 November 1957.

LLS:rc

CONVAIR-POMONA AND CONVAIR-SAN DIEGO
WORK ORDER CROSS REFERENCE LIST
AS OF 15 NOVEMBER 1959

CONVAIR-SAN DIEGO			CONVAIR-POMONA			
Contract and/or Sales Order	A. W. O.	Work-In Process Account	Contract and/or Purchase Order	Code Number	A.W.O.	Work-In Process Account
AF 33(600) 31174	---	137	P. O. 319400	660	1995	137
"	18701	"	"	654	8032	"
"	18711	"	"	"	8711	"
AF 41(608) 8943	2533	"	"	662	2533	"
AF 41(608) 9911	2700	"	"	663	8896	"
"	2711	"	"	"	8897	"
"	2712	"	"	"	8899	"
"	2715	"	"	"	8898	"
"	2731	"	"	"	8900	"
"	2750	"	"	"	8901	"
"	2756	"	"	"	8902	"
Commercial	30064	137	P. O. 526622	680	3020	137
"	30000	"	"	681	3024	"
"	---	"	"	682	3025	"
"	30001	"	"	683	1150	"
"	30002	"	"	"	1155	"
"	30003	"	"	"	1174	"
"	30032	"	"	"	1175	"
"	30084	"	"	"	1163	"
"	30551	"	"	"	1153	"
"	30582	"	"	"	1151	"
"	30583	"	"	"	1154	"
"	30593	"	"	"	1152	"
"	30626	"	"	"	1159	"
"	31054	"	"	"	1170	"
"	90050	"	"	"	1156	"
"	90101	"	"	"	1157	"
"	90102	"	"	"	1168	"
"	90107	"	"	"	1169	"
"	90109	"	"	"	1171	"
"	90111	"	"	"	1160	"
"	90112	"	"	"	1161	"
"	90113	"	"	"	1162	"
"	A/C 133-76	"	"	"	1173	"
"	---	"	"	690	3630	"
"	31001	"	"	691	1001	"
"	31032	"	"	"	1177	"
"	8607	"	"	"	1176	"
"	---	"	"	692	3656	"
"	30003	"	"	"	1172	"
"	---	"	"	751	4414	"
"	30004	"	"	"	1178	"
"	---	"	"	752	4415	"
"	31002	"	"	"	1179	"

CONVAIR-POMONA AND CONVAIR-SAN DIEGO
WORK ORDER CROSS REFERENCE LIST
AS OF 15 NOVEMBER 1959

CONVAIR-SAN DIEGO

Contract and/or Sales Order	A. W. O.	Work-In Process Account
AF 41(608) 8113	385	135
AF 41(608) 8823	1341	"
AF 41(608) 9511	1354	137
AF 33(600) 33808	19859	"
AF 33(600) 34814	21811	"
Commercial	---	137
"	298	"
"	30000	"
"	30001	"
"	30002	"
"	30003	"
"	30004	"
"	30080	"
"	30082	"
"	30626	"
"	31000	"
"	31001	"
"	31002	"
"	31051	"
"	31054	"
"	31084	"
"	31901	"
"	80166	"
"	80167	"
"	80168	"
"	80169	"
"	80170	"
"	80171	"
"	80172	"
"	80173	"
"	80174	"
"	90101	"
"	90102	"
"	90104	"
"	90105	"
"	90107	"
"	90108	"
"	90109	"
"	90111	"
"	90112	"
"	90113	"
"	90114	"
	90115	"

CONVAIR-POMONA

Contract and/or Purchase Order	Code Number	A.W.O.	Work-In Process Account
P. O. 532495	571	3055	137
"	"	3054	"
"	"	3631	"
"	"	3094	"
"	"	3635	"
P. O. 553733	695	3686	137
"	"	1204	"
"	"	1223	"
"	"	1201	"
"	"	1192	"
"	"	1190	"
"	"	1216	"
"	"	1224	"
"	"	1198	"
"	"	1214	"
"	"	1226	"
"	"	1191	"
"	"	1203	"
"	"	1199	"
"	"	1212	"
"	"	1222	"
"	"	1225	"
"	"	1218	"
"	"	1208	"
"	"	1219	"
"	"	1209	"
"	"	1210	"
"	"	1220	"
"	"	1213	"
"	"	1215	"
"	"	1217	"
"	"	1193	"
"	"	1205	"
"	"	1211	"
"	"	1206	"
"	"	1207	"
"	"	1221	"
"	"	1194	"
"	"	1195	"
"	"	1200	"
"	"	1196	"
"	"	1202	"
"	"	1197	"

CONVAIR-POMONA AND CONVAIR-SAN DIEGO
WORK ORDER CROSS REFERENCE LIST
AS OF 15 NOVEMBER 1959

CONVAIR-SAN DIEGO

Contract and/or Sales Order	A. W. O.	Work-In Process Account
AF 18(600) 1843	608	134
AF 33(616) 6721	419	134
AF 33(600) 38050	469	134
NOas 56-978-d	1672	135

CONVAIR-POMONA

Contract and/or Purchase Order	Code Number	A.W.O.	Work-In Process Account
P. O. 554663	189	4313	136
P. O. 554680	197	4339	136
P. O. 579669	184	3593	136
P. O. 603433	696	3695	137

E. F. Johnson
Supervisor Cost Accounting

Issued By: Industrial Accounting Department
Convair-Pomona
2 December 1959

SDE:bjm

NOV 13 1958

436
487
459

C O N V A I R
A Division of General Dynamics Corporation
SAN DIEGO AND POMONA DIVISION WORK ORDER CROSS R[illegible]

AS OF 11 November 1958

Page 1 of 3

[illegible]	[illegible]	[illegible]	Work in Process Account	Contract and/or Purchase Order	C.S. Number	W.O.	Work in Process Account
[illegible]	[illegible]	[illegible]	[illegible]	P. O. 319400	[illegible]	4001	136
		[illegible]		"	"	4002	"
		[illegible]03	"	"	"	4003	"
		[illegible]	"	"	"	4004	"
	"	[illegible]05	"	"	"	4005	"
		[illegible]06	"	"	"	4006	"
		[illegible]07	"	"	"	4007	"
		[illegible]	"	"	"	4071	
	"	[illegible]10	"	"	"	[illegible]	"
		[illegible]		"	"	[illegible]	"
	"	[illegible]02	"	"	"	[illegible]2	"
	"	[illegible]	"	"	"	[illegible]	"
[illegible]	[illegible]	[illegible]	[illegible]	P. O. 319[illegible]	154	[illegible]	1<6
[illegible]	[illegible]	[illegible]-1	"	P. O. 31[illegible]	652	5032	157
	"	[illegible]-2	"	"	"	5032	"
	"	[illegible]-1		"	"	5191	"
		[illegible]-2	"	"	"	5191	"
	"	[illegible]-1	"	"	"	5281	"
A[illegible]	600 [illegible]	[illegible]	137	P. O. 319400	654	8000	137
	"	[illegible]01	"	"	"	8001	"
	"	18002	"	"	"	8002	"
	"	18003	"	"	"	8003	"
	"	18004	"	"	"	8004	"
	"	18005	"	"	"	8005	"
	"	18006	"	"	"	8006	"
	"	18007	"	"	"	8007	"
	"	18008	"	"	"	8008	"
	"	18010	"	"	"	8010	"
	"	18011	"	"	"	[illegible]	"
	"	18012	"	"	"	8012	"
	"	18013	"	"	"	8013	"
	"	18014	"	"	"	8014	"
	"	18015	"	"	"	8015	"
	"	18016	"	"	"	8016	"
	"	18017		"	"	8017	"
	"	18018	"	"	"	8018	"
	"	13701	"	"	"	8032	"
	"	18049	"	"	"	8049	"
	"	18075	"	"	"	8075	"
	"	[illegible]	"	"	"	8128	"
	"	[illegible]	"	"	"	8711	"
[illegible]	[illegible]	[illegible]	[illegible]	P. O. 319400	654	8760	137
		[illegible]	"	"	"	8895	"
	[illegible]	[illegible]	[illegible]7	P. O. 3[illegible]	656	3901	137
		[illegible]	"	"	"	3902	"
			"	"	"	[illegible]	"
				"		[illegible]	"

San Diego and Pomona Division
Work Order Cross Reference List
As of 11 November 1958

SAN DIEGO DIVISION			POMONA DIVISION			
Contract and/or Sales Order	A.W.O.	Work-In Process Account	Contract and/or Purchase Order	Code Number	A.W.O.	Work-In Process Account
AF 41 (608) 7768	[illegible]	[illegible]	P [illegible] 319400	[illegible]	"	[illegible]
"	2300	"	"	"	[illegible]	[illegible]
"	2417	"	"	[illegible]	[illegible]	
"	[illegible]	"	"		[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]		[illegible]	
"	[illegible]	[illegible]	[illegible]		[illegible]	
[illegible]	[illegible]	[illegible]	P [illegible]	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	"		[illegible]	[illegible]
"	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
[illegible] (600) [illegible]	285	135	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	137	[illegible]	662	[illegible]	[illegible]
"	2533	"	"	"	2533	"
- - -	- - -	- - -	P [illegible]	[illegible]	[illegible]	[illegible]
AF [illegible] (600) 31227	[illegible]	135	P. [illegible]	[illegible]	[illegible]	1
AF [illegible] (616) 3283	605	134	P. [illegible]	[illegible]	[illegible]	[illegible]
AF 3B (616) 3283	607	134	P [illegible]	[illegible]	[illegible]	[illegible]
[illegible] (600) 30169	175[illegible]	136	P [illegible]	[illegible]	[illegible]	[illegible]
- - -	- - -	- - -	P. [illegible] 505 [illegible]	[illegible]	[illegible]	[illegible]
- - -	- - -	- - -	"	[illegible]	[illegible]	"
- - -	- - -	- - -	"	[illegible]	[illegible]	"
[illegible] (600) 7769	664	135	P. O. 505330	[illegible]	[illegible]	137
" Internal	53635	[illegible]	P. O. 505320	[illegible]	[illegible]	[illegible]
"	53674	"	"	"	[illegible]	[illegible]
"	53728	"	"		[illegible]	[illegible]
"	80141	"	"	"	[illegible]	[illegible]
"	[illegible]	"	"	[illegible]	[illegible]	[illegible]
[illegible]	80143	"	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	80146	[illegible]	[illegible]	[illegible]	[illegible]	
"	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	

San Diego and Pomona Division
Work Order Cross Reference List
as of 11 November 1958

SAN DIEGO DIVISION			POMONA DIVISION			
Contract and/or Sales Order	A.W.O.	Work-In Process Account	Contract and/or Purchase Order	Code Number	A.W.O.	Work-In Process Account
Commercial	53750	137	P. O. 505330	687	1195	137
"	53723	"	"	"	1196	"
"	53623	"	"	"	1197	"
"	3708	"	"	"	1198	"
"	80201	"	"	"	1200	"
"	80202	"	"	"	1201	"
N 383-46360 A	1213	137	P. O. 505330	688	1199	137
—	—	—	P. O. 505329	689	3065	137
Commercial	30064	137	P. O. 526622	680	3020	137
"	30440	"	"	"	3042	"
Commercial	30000	137	P. O. 526622	681	3024	137
—	—	—	P. O. 526622	682	3025	137
Commercial	30001	137	P. O. 526622	683	1150	137
"	30002	"	"	"	1155	"
"	30551	"	"	"	1153	"
"	30582	"	"	"	1151	"
"	30583	"	"	"	1154	"
"	30590	"	"	"	1158	"
"	30593	"	"	"	1152	"
"	30626	"	"	"	1159	"
"	90050	"	"	"	1156	"
"	90101	"	"	"	1157	"
"	90111	"	"	"	1160	"
"	90112	"	"	"	1161	"
"	90113	"	"	"	1162	"
"	30080	"	"	"	1166	"
"	30084	"	"	"	1163	"
Link P. O. 156876	292	135	P. O. 526622	684	1165	137
AF 41 (608) 8823	1341	135	P. O. 532495 SD	571	3054	137
AF 41 (608) 8113	385	135	P. O. 532495 SD	571	3055	137
AF 33 (600) 33808	19859	137	P. O. 532495 SD	571	3094	137

Note: 1. This Cross Reference List of San Diego Division and Pomona Division Work Orders supersedes all previous lists issued. The list is sequenced according to Pomona Division purchase orders, code number and accounting work order.
2. This San Diego List covers only work orders actively in use.

C. A. Benak
Supervisor Cost Accounting

Issued By: Convair-Pomona Division
Industrial Accounting Department
11 November 1958

23 Sept 1957

Instrumentation Aircraft SC 1a 3-1-14B

Convair

56-451 ✓
452
453
455 ✓
456 ✓
458 ✓
459 ✓
460 ✓
464 ✓ ✓
465
237

57-2507
2510

57-230 231
232
233

2507
2514

Outside agency

56-454
56-457
56-461
56-462
56-463
56-465
56-466
56 467
57-229
57-230
57-231
57-232
57-233 /
57-234
57-235
57-236
57-238
57-239
57-240
57-241
57-242
57-243

57-2508
2509 Instrument to 1003-1-225
2511
2512
2513
2514

CONVAIR
A Division of General Dynamics Corporation
(San Diego)

DESIGN INFORMATION BULLETIN
REPORT NO. ZM-8-001
MODEL 8 AIRPLANE (F-102)

NO: 24.005

DATE: 1 July 1954
REVISED: 22 July 1955
REVISED: 31 October 1955
REVISED: 7 November 1955
REVISED: 3 April 1956
REVISED: 1 October 1956
REVISED: 1 December 1956

PAGE: 1 of 3

F-102 ACCELERATED DEVELOPMENT FLIGHT TEST PROGRAM

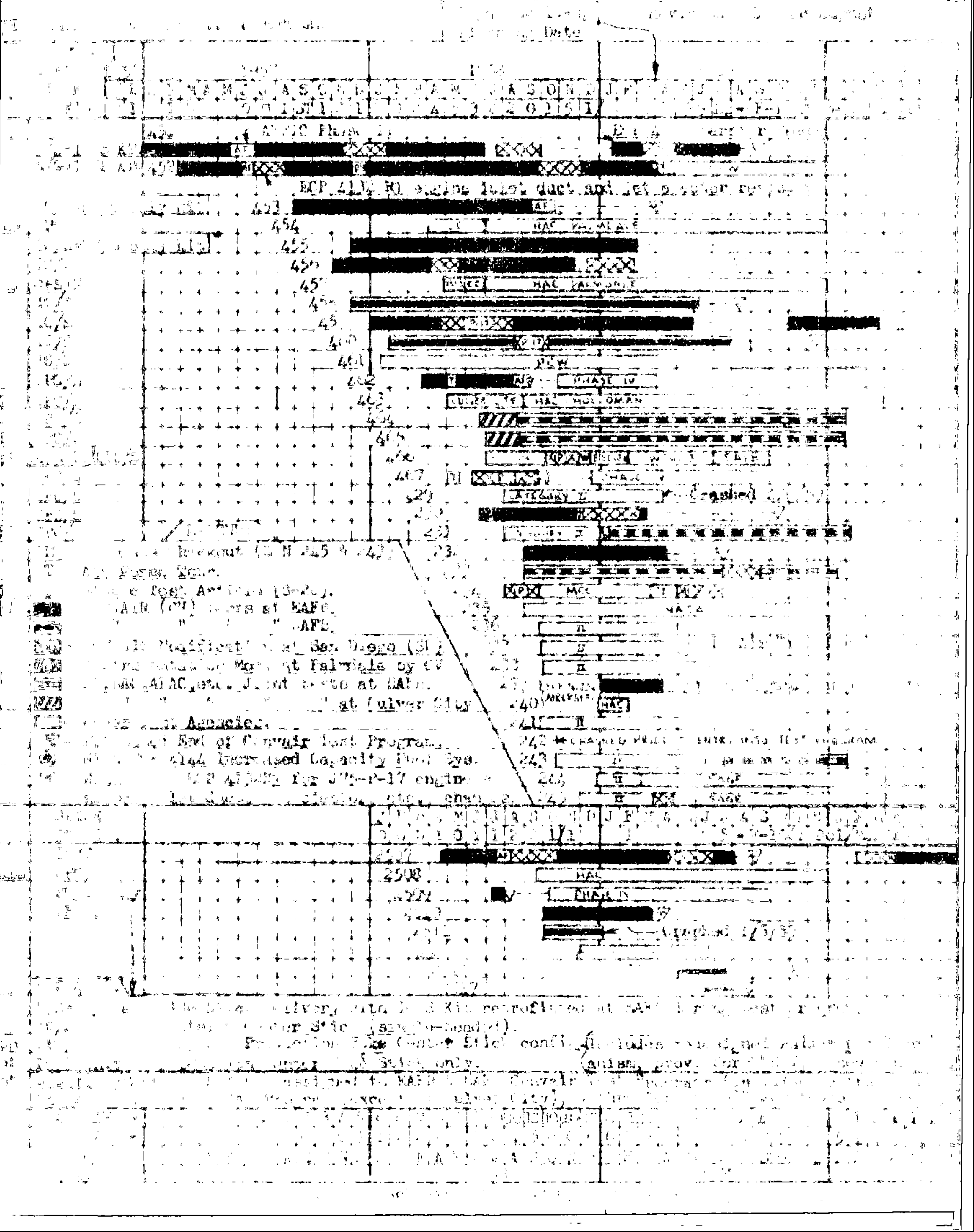
All Flight Test Program planning and supporting functions should be based on the attached airplane assignment charts dated 1 December 1956.

Approved by
W. W. Fox
Senior Project Engineer

	FLIGHT TEST PROGRAM MONTHS	TEST AGENCY	TEST FAC
[illegible]	[illegible]		
[illegible] Development	$12/6$	CONVAIR	EAF
[illegible]	26	CV	EAF
[illegible] Development	17	CONVAIR	EAF
[illegible]	21	FA	CC/Palm
[illegible]	15	CONVAIR	EAF
[illegible] Derivatives/Antennae	[illegible]	CONVAIR	EAF
[illegible]	20	HAC	CC/Palm
[illegible] Feasibility	18	[illegible]	EAF
[illegible] Support	24	CONVAIR	EAF
[illegible] Facilities	[illegible]	CONVAIR	EAF
[illegible]	[illegible]	FA	EAF
[illegible] Control	[illegible]	CV/A	EAF
[illegible] Development	[illegible]	[illegible]	CC/
Armament Development (AAD)	2¼	[illegible]	CC/
Armament Development (AAD)	[illegible]	CV	CC/A
[illegible] Antennae, [illegible]	15	WADC	WPAFB
[illegible] Part.	[illegible]	CV/AF	EAF
[illegible] Walker	8¼	AFFTC	EAF
[illegible]	8½	CONVAIR	EAF
[illegible]	[illegible]	AF	EAFB
[illegible]	[illegible]	CONVAIR	EAF
[illegible] Development (AAD)	[illegible]	CV	EAF
[illegible]	[illegible]	AF	EAF
[illegible] Equipment	[illegible]	NAC	Holl
[illegible]	[illegible]	AF	EAF
[illegible]	[illegible]	CONVAIR	
[illegible] Dev.	[illegible]		EAF
[illegible]			EAF
[illegible]	5¾ 5	AFF	EAFB
[illegible] Evaluation	3¼		
[illegible] over, [illegible] months	4		
[illegible] Test	[illegible]		EAF
[illegible]	1		EAF
[illegible] Control	[illegible]	CONVAIR	EAF
[illegible]	[illegible]	CONVAIR	EAF
[illegible]	[illegible]	AF	EAF
[illegible]	[illegible]	[illegible]	EAF

MA-1 [illegible]

[illegible] with [illegible] the Direct[illegible]


Date
ARDC Phase II
ECP 4116 R1 engine inlet duct and jet ejector rev.
423
454
455
456
457
HAC PALMDALE
461
RFW
PHASE IV
463
HAC HOLLOMAN
465
467
PHASE
Crashed
CATEGORY II
233
HAC
NACA
240
242
243
PHASE
Breakout (S/N 245 & 242)
All Dates Scheduled.
AFB
Modification at San Diego (SD)
at Palmdale by CV
ARDC, etc. Joint tests at EAFB.
at Culver City
Agencies.
End of Convair Test Program.
Increased Capacity Fuel Sys.
ECP 4112R1 for J75-P-17 engine
2507
2508
PHASE IV
Crashed
Delivery with ... Kit retrofitted at EAFB
Sqdn (single-seater)
Production Type Center Stick config.
Stick only.
assigned to EAFB ... Convair test program
Culver City

CONVAIR - SD

Date: R19 February 1958
Use: File 7.6G
Revised page 1 only
* added

FEB 21 1958

To: Tool and Operations Planners

Subject: O.I.L. Tab Code for F-106A

LINE NAME	DEPT.	ITEM	LINE NO.	REMARKS
Field Operations - S.D.	271	1	8-00053-900	
Field Operations - Palmdale	321	1	8-00051-901	
Loose Equipment	292	1	8-00053-905	
Electronics Instl. & Oper.	321 270	2	8-30020-900	
Electronics Bench Test	321 270	3	8-30020-902	
Fuse. Panel - L/H(Sta. 556-593)	FW	13	8-74470-905	Limit 8-23-4
Fuse. Panel - R/H(Sta. 556-593)	FW	14	8-74470-906	
Fuse. Panel - L/H(Sta. 472-520)	FW	15	8-74470-901	
Fuse. Panel - R/H(Sta. 472-520)	FW	16	8-74470-902	
Fuse. Panel - L/H(Sta. 520-556)	FW	17	8-74470-903	
Fuse. Panel - R/H(Sta. 520-556)	FW	18	8-74470-904	Limit 8-23-4
Final Assembly	267	30	8-00053-902	
Engine Build-up	267	31	8-22095-900	
Tail Cone	FW	32	8-74490-900	
Tail Cone	218	32	8-74490-902	Limit 8-24-8
Tail Cone	218	32	8-77304-900	8-24-8 & on
*Engine Shroud	218	33	8-22654-950	24-8 & on 27-8 & on
Radar Comp't. Fwd.	FW#	35	8-74440-900	
Fuse. Panel - R/H(Aft Barrel)	FW	36	8-74470-907	Limit 8-23-4
Fuse. Panel - L/H(Aft. Barrel)	FW	37	8-74470-908	Limit 8-23-4
Elevon Inbd. - R/H	FW#	42	8-13031-902	
Elevon Inbd. - L/H	FW#	43	8-13031-901	
Wing Trailing Edge - R/H	233	44	8-18033-902	Limit 8-21-4
Wing Trailing Edge - L/H	233	45	8-18033-901	thru 8-22-6
Wing Primary - R/H	233	50	8-18003-902	8-23-4
Wing Primary - L/H	233	51	8-18003-901	8-26-1 8-27-1
Elevon Outbd. - R/H	FW	52	8-13032-902	Limit 8-23-4
Elevon Outbd. - L/H	FW	53	8-13032-901	Limit 8-23-4
Wing Leading Edge - R/H	FW	56	8-18230	Limit 8-23-4
Wing Leading Edge - L/H	FW	57	8-18230	Limit 8-23-4
Main Landing Gear - R/H	233	58	8-51013-902	
Main Landing Gear - L/H	233	59	8-51013-901	

O.I.L. Tab Code for Model 8-10, 8-12

LINE NAME	DEPT.	ITEM	LINE NO.	EFFECTIVITY	
Wing T.E. R/H	40	44	8-17033-922	All	8-10 #1-194@
Wing T.E. L/H	40	45	8-17033-921	All	8-12 #1-25@
@ - Sub-contracted to AVCO Mfg. Co. - Nashville - 8-10 #195 & 8-12 #26 & on					
Rocket Dr. Upr. Fwd. R/H	40	46	8-54502-2		
Rocket Dr. Upr. Fwd. L/H	40	47	8-54502-1	8-10 #1-58@	
Rocket Dr. Upr. Aft R/H	40	48	8-54502-6	8-12 #1-14@	
Rocket Dr. Upr. Aft L/H	40	49	8-54502-5		
@ - Sub-contracted to F.W. 8-10 #59 & 8-12 #15 & on.					
Wing Primary R/H	233	50	8-17003-902	All	8-10 #1-533
Wing Primary L/H	233	51	8-17003-901	All	8-12 #1-67
Wing Primary R/H	233	50	8-17003-970	8-10 #534 & on	
Wing Primary L/H	233	51	8-17003-969	8-12 #68 & on	
Elevon Outbd. R/H	40	52	8-12030-904	8-10 #1-58@	
Elevon Outbd. L/H	40	53	8-12030-903	8-12 #1-14@	
@ - Sub-contracted to F.W. 8-10 #59 & 8-12 #15 & on.					
Wing L.E. R/H	40	56	8-17230-902	8-10 #1-58@	
Wing L.E. L/H	40	57	8-17230-901	8-12 #1-14@	
@ - Sub-contracted to F.W. 8-10 #59 & 8-12 #15 & on.					
Wing Structure R/H	233	60	8-17002-902	All	8-10 #1-533
Wing Structure L/H	233	61	8-17002-901	All	8-12 #1-67
Wing Structure R/H	233	60	8-17018-902	8-10 #534 & on	
Wing Structure L/H	233	61	8-17018-901	8-12 #68 & on	
Main Landing Gear R/H	233	58	8-51001-910	All	
Main Landing Gear L/H	233	59	8-51001-909	All	
Wing Tank Aft R/H	233	62	8-17032-902	All	
Wing Tank Aft L/H	233	63	8-17032-901	All	8-10 #1-533
Wing Tank Fwd. R/H	233	64	8-17030-902	All	8-12 #1-67
Wing Tank Fwd. L/H	233	65	8-17030-901	All	
Wing Tank Aft - R/H	233	62	8-17062-902	8-10 #534 & on	
Wing Tank Aft L/H	233	63	8-17062-901	8-12 #68 & on	
Wing Tank Aft R/H	233	64	8-17060-902		
Wing Tank Aft - L/H	233	65	8-17060-901		
Vertical Fin (Small)	232	66	8-14015-900	8-10 #1-40@, 8-12 #1-9@	
@ - Sub-contracted to F.W. 8-10 #40 thru 98 and 8-12 #10 thru 20					
Vertical Fin (Mod.)	232	66	8-14021-900	8-10 #66-98@@	
@@ - Dual Source - S.D. and Rheem per Mfg. Schedl.				8-12 #5-7 & 11-20@@	
Vertical Fin (Large)	232	66	8-14020-900	8-10 #99 and on@@@	
			8-14020-904	8-12 #21 & on@@@	
@@@ - Triple Source - S.D., F.W. & Rheem per Mfg. Schedule.					

@ - Sub-contracted

* - Revised + converted to new department numbers.

CONVAIR - SD

O.I.L. Tab Code for Model 8-10, 8-12

LINE NAME	DEPT.	ITEM	LINE NUMBER	EFFECTIVITY
Fuselage Primary	266	70	8-73000-900	All
Rocket Door Lower - L/H	40	73	8-56611-801	8-10 #1-58@ 8-12 #1-14@
Rocket Door Lower - R/H	40	74	8-56611-803	
Rocket Door Interm. - L/H	40	75	8-56612-801	
Rocket Door Interm. - R/H	40	76	8-56612-803	

@-Sub-contracted to F.W. 8-10 #59 & 8-12 #15 & on

LINE NAME	DEPT.	ITEM	LINE NUMBER	EFFECTIVITY
Fuselage Structure	232	80	8-73000-902	All
Fuselage Fwd. Barrel	231	81	8-73003-900	8-10 Only
Fuselage Aft Barrel	232	82	8-73004-900	All
Fuselage Interm. Aft Barrel	232	83	8-73068-900	All
Fuselage Aft Barrel Sect.	232	84	8-73070-900	All
Fuselage Fwd. Panel L/H	231	85	8-73033-901	8-10 Only
Fuselage Fwd. Panel R/H	231	86	8-73033-902	8-10 Only
Fuselage Aft Panel L/H	231	87	8-73034-901	All
Fuselage Aft Panel R/H	231	88	8-73034-902	All
Fuselage Lower Structure 405-443	232	89	8-73039-900	All
Fuselage Pilots Compt.	230	90	8-73002-900	8-10 Only
Pilots Compt. Side Panel L/H	230	91	8-73013-900	8-10 Only
Pilots Compt. Side Panel R/H	230	92	8-73014-900	8-10 Only
Pilots Floor	230	93	8-73015-900	8-10 #1-88@

@-Sub-contracted to F.W. 8-10 #89 & on

LINE NAME	DEPT.	ITEM	LINE NUMBER	EFFECTIVITY
Air Scoop R/H	230	94	8-73522-902	8-10 Only
Air Scoop L/H	230	95	8-73522-901	8-10 Only
Nose Landing Gear	233	96	8-52000-910	8-10 Only

PAINT OILS

				STA.	EFFECTIVITY
Aft Tank Panel Assy - R/H	204	22	8-17032-972	1	8-10 #59-533 8-12 #16-67
Aft Tank Panel Assy - L/H	204	23	8-17032-971	1	
Fwd. Tank Panel Assy - R/H	204	24	8-17030-972	1	
Fwd. Tank Panel Assy - L/H	204	25	8-17030-971	1	
Aft Tank Panel Assy - R/H	204	22	8-17062-972	1	8-10 #534 & on 8-12 #68 & on
Aft Tank Panel Assy - L/H	204	23	8-17062-971	1	
Fwd. Tank Panel Assy - R/H	204	24	8-17060-972	1	
Fwd. Tank Panel Assy - L/H	204	25	8-17060-971	1	
Phase (3) Paint-Mark & Stencil	204	30	8-00004-917	4	All
(1) Phase (3) Paint-Mark & Stencil	204	30	8-00004-917	7	All 8-10 #1-250 8-12 #1-23
Fuse. Fwd. Half Barrel	204	40	8-00004-983	1	8-12 Only

*Revised + converted to new department numbers
@-Sub-contracted.

OIL Tab Code for Model 8-10, 8-12

LINE NAME	DEPT.	ITEM	LINE NUMBER	STA.	EFFECTIVITY
Exter. Finish - Mark & Stencil	321	4	8-00004-910	10	8-10 #251 & on 8-12 #24 & on
#6 Spar Area & Wheel Well Area R/H	204	50	8-00004-902	1	All
#6 Spar Area & Wheel Well Area L/H	204	51	8-00004-903	1	All
Intermed. Sect. R/H	204	60	8-00004-904	1	All
Intermed. Sect. L/H	204	61	8-00004-905	1	All
Vertical Fin	204	66	8-00004-919	1	All
Fwd. Radar Compt.	204	35	8-00004-970	1	8-10 Only
Fuse. Aft Barrel R/H	204	36	8-00004-972	1	All
Fuse. Aft Barrel L/H	204	37	8-00004-971	1	All
Forward Barrel	204	81	8-00004-907	2	8-10 Only
Fuselage Structure	204	80	8-00004-911	2	
Nose Wheel Well & Cockpit Area	204	90	8-00004-913	5	8-10 Only
Fin & Rudder Mating Area	204	70	8-00004-915	1	All
Wing Mating Area	204	70	8-00004-915	3	All
Air Scoop L/H	204	94	8-00004-920	1	8-10 Only
Air Scoop R/H	204	95	8-00004-921	1	8-10 Only
Pilots Compt. Side Panel R/H	204	92	8-00004-922	1	8-10 Only
Pilots Compt. Side Panel L/H	204	91	8-00004-923	1	8-10 Only
Fuse. Fwd. Panel L/H	204	85	8-00004-929	1	8-10 Only
Fuse. Fwd. Panel R/H	204	86	8-00004-930	1	8-10 Only
Fuse. Aft Panel L/H	204	87	8-00004-931	1	All
Fuse. Aft Panel R/H	204	88	8-00004-932	1	All
Nose Landing Gear	204	96	8-00004-965	1	8-10 #1-139
Fuse. Intermed. Aft Barrel	204	83	8-00004-967	1	All
Fuse. Lwr. Struct. 405-443	204	89	8-00004-968	1	All
Engine Buildup	204	31	8-00004-969	1	All
Main Landing Gear L/H	204	59	8-00004-975	1	8-10 #1-136 8-12 #1-23
Main Landing Gear R/H	204	58	8-00004-976	1	
Wing Tank Aft L/H	204	63	8-00004-977	1	All
Wing Tank Aft R/H	204	62	8-00004-978	1	All
Wing Tank Fwd. L/H	204	65	8-00004-979	1	All
Wing Tank Fwd. R/H	204	64	8-00004-980	1	All

*Revised + converted to new department numbers.

A.M. Van Horne

A.M. Van Horne - General Supervisor
T&O Planning - Plant 2

GR/jm

[illegible] Reconciliation [illegible] Trial Balance

[redacted] AF [illegible] 60[illegible] [illegible]

February 28, 19[illegible]

1	Trial Balance Total		117,388,929.70
2			
3	Inventory of Accumulated Costs		
4	Model 8-80	17,352,785.87	
5	" 8-82	32,708,600.39	
6	" 8-90	28,354,590.70	
7	" 8-10	22,551,666.09	
8	Flight Research Operations	460,486.89	
9	Flight Test Program	5,055,574.28	
10	Other [illegible] Programs	6,549,391.03	
11	Spares	3,421,622.96	
12	Special Tools & Gr. Equipment	839,127.86	
13	Mod. [illegible] Costs	85,081.63	
14			
15	Reconciled Total		117,38[illegible]929.70

25	G & A Overhead	Statement
26	Model 8-80	233,007.67
27	" 8-82	329,444.88
28	" 8-90	368,966.52
29	" 8-10	376,177.53
30	Unallocated	1,446.39
31	Flight Test Program	69,305.41
32	Spares	29,178.83
33	Special Tools & Equip.	7,594.96
34	Mod. L. H.	474.74
35	[illegible]	78,[illegible]
36	Total	5,837,312.34

Inc[illegible] 5869 [illegible]

STAT

	Total Project Costs	Spares	Special Tools & Gr. Equipment	Mobile Training Units	Actual Project Costs
ENGINEERING					
DESIGN AND LIAISON					
Direct Labor Hours	42402146		379942	46397	4197
Direct Labor Costs	1164117367		10406144	1570551	11521
Overtime Premium	93844749		498278	66857	932
Overhead	1010841918		8717075	1068649	10010
Subcontract Costs	15809560			4279768	110
Material & Other Costs	366112281		1871592	408	5148
Fort Worth Activity	339419				33
Total	2651165294		21493089	6986231	26226
SERVICE PUBLICATIONS					
Direct Labor Hours	1686762				1686
Direct Labor Costs	37918881				3791
Overtime Premium	2713310				271
Overhead	38977394				3891
Subcontract Costs					
Material and Other Costs	8249102				824
Total	87858687				8785
FIELD SERVICE REP.					
Direct Labor Hours	145910				1459
Direct Labor Costs	4366280				4366
Overtime Premium	251340				251
Overhead	2770221				2770
Travel & Per Diem, etc.	1486631				1486
Total	8874472				8874

EMENT OF ACCUMULATED COSTS

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Contract AF 33(600)-5942

28 February 1955

		2	8	4	28 - ST	Other Costs	Flight	Instrumen-
		YF - 102	YF - 102	F - 102A	F - 102A	Palmdale	Test	tation
		(8-80)	(8-82)	(8-90)	(8-10)	Operations	Program	Program
07		12526984	78124	6464852	9396616	1960	5443767	8073304
6 72		349955925	2276263	190905891	272085072	44397	142229109	194644015
6 14		14491924	125649	12306037	25814601	15431	12719790	22806182
1 96		280241235	1787390	133972025	222092050	45064	172014608	189523754
7 92		10157973	206048	4633578	104242		117951	
2 81		61988306	19480705	9503368	2842577	120725	62037882	203366738
4 19		32886	175232		131301			
9 74		721848249	24051287	348550969	523049843	225597	394619340	610340689
6 2		1268875		172641	245346			
8 81		21071849		4187314	5659718			
3 10		2189195		246853	277762			
3 94		29520526		3948088	5508780			
1 02		5976690	13909	196639	2067924			
6 87		63752200	13909	8578394	12514184			
1 0							145910	
2 80							4366280	
3 40							251340	
2 21							2770221	
6 31							1486631	
4 72							8874472	

STA

	Total Project Costs	Spares	Special Tools & Gr. Equipment	Mobile Training Units	Actual Project Costs
EXPERIMENTAL FLIGHT					
Flight Hours					
Direct Labor Hours	410				2
Direct Labor Costs	20030				20
Overtime Premium	1406				1
Overhead	38180				38
Material & Other Costs	4256820				4256
Hazzard Pay	500000				500
Total	4816436				4816
EXPERIMENTAL FACTORY					
Direct Labor Hours	19970756				19970
Direct Labor Costs	388810908				38881
Overtime Premium	40455288				40455
Overhead	492650879				49265
Subcontract Costs	7802450				7802
Material & Other	154932157				154932
Fort Worth Activity	1368952				136
Total	1086020634				1086020
WIND TUNNEL					
Occupancy Hours	11560				115
Direct Labor Hours	661942				6619
Direct Labor Costs	16284104				16284
Overtime Premium	704279				704
Overhead	7867538				7867
Subcontract Costs	11824434				11824
Material & Other Costs	1065593				1065
Total	37745948				37745
TOTAL ENGINEERING	387648471		21493089	16986231	3848002

EMENT OF ACCUMULATED COSTS

ontract AF 33(600)-5942

28 February 1955

	2 YF - 102 (8-80)	8 YF - 102 (8-82)	4 F - 102A (8-90)	28 - ST F - 102A (8-10)	Other Costs Palmdale Operations	Flight Test Program	Instrumentation Program
/10	95					3 15	
030	32 65					167 45	
406						14 06	
180	78 01					303 79	
820	1338 59					21634 75	19594 86
000						5000 00	
436	1449 25					27120 25	19594 86
56	1445301 80	41448 23	39469 27	9749 03		4980 82	2063 41
908	2757305 63	85110 79	695481 46	208077 43		101913 52	42220 25
288	338160 75	8131 09	38436 45	5049 22		13655 41	1139 96
879	3547958 83	106011 63	852547 53	238855 70		128871 01	52292 09
450	56687 25		6651 97	14685 28			
157	804318 85	11745 04	345126 28	121289 46		175977 94	92864 00
952	15689 52						
634	7518114 83	210998 55	1934243 69	587935 09		420997 88	188516 30
60	106 65		90				8 05
42	5475 45		678 56	179 74			285 70
104	129763 70		19188 98	5107 71			8820 65
279	5444 62		1077 47	347 34			172 36
538	71103 68		86 09				6707 61
434	118244 34						
593	4384 42		5661 69	709 82			
948	328800 76		26792 23	6164 87			15701 62
151	15724369 33	451650 51	5532329 55	5929746 23	2255 97	448246 25	6327319 67

ST

	Total Project Costs	Spares	Special Tools & Gr. Equipment	Mobile Training Units	Actual Project Costs
TOOLING					
TOOL ENGINEERING					
Direct Labor Hours	10361893	179608	10060		101722
Direct Labor Costs	245734594	4154147	219278		241361
Overtime Premium	12221525	31005	1639		12188
Overhead	172749118	2993900	210397		16954
Subcontract Costs	32530600				32530
Fort Worth Activity	53202107				53202
Total	516437944	7179052	431314		508827
TOOL MANUFACTURING					
Direct Labor Hours	40388876	10399	10858		403676
Direct Labor Costs	818952416	215682	236403		818500
Overtime Premium	51441288	3670	1478		51436
Overhead	1018047606	255179	246485		101754
Raw Mat'l & Pur. Parts	315407027	136583	678382		314592
Subcontract Costs	128721170				128721
Other Costs	149402924	30043	54383		14935
Fort Worth Activity	254998707				254998
Total	2736971398	641157	1217131		273511
PLANT ENGINEERING					
Direct Labor Hours	2220979	240	20		22207
Direct Labor Costs	46733138	5014	1461		46726
Overtime Premium	1379354	37	754		1378
Overhead	54512282	5971	1968		54504
Subcontract Costs					
Material and Other Costs	59231543				59231
Total	161856117	11022	4183		161840
TOTAL TOOLING	3415265459	7831231	1652628		3405781

TEMENT OF ACCUMULATED COSTS

Contract AF 33(600)-5942

28 February 1955

		2 YF - 102 (8-80)	8 YF - 102 (8-82)	4 F - 102A (8-90)	28 - ST F - 102A (8-10)	Other Costs Palmdale Operations	Flight Test Program	Instrumentation Program
25			281533 50	21832 25	51072 19	2 20	327 88	324 63
169			662567 82	527542 20	1208441 18	45 22	7586 39	7425 88
881			46020 46	23376 49	51799 25	11 20	462 66	18 65
821			459725 01	367603 99	854344 80	36 63	7804 24	5936 54
600			225306 00					
107			470333 56		61697 51			
578			1963942 85	918723 68	2176279 84	93 05	15853 29	13381 07
19		7821 12	131807 95	120261 69	143546 57		170 95	67 93
331		142238 73	2573891 63	2470449 03	2993234 28		3518 77	1370 67
140		5877 66	166729 59	167375 63	174172 65		148 63	57 26
742		175416 01	3504051 54	3029705 30	3606034 27		4330 08	1722 22
062		36107 90	2242672 80	406515 67	455730 97		4670 35	217 93
170			1032515 74	107331 66	127464 30			
558		1621 94	305841 84	669180 91	513452 66		51 64	3234 59
207			2144989 65		404999 42			
110		361562 44	11790692 77	6904478 20	8275093 55		12719 48	6384 67
53		96 76	15790 61	3761 78	220 97	977 74	1358 67	
663		1894 00	232694 49	78790 27	4863 71	21301 78	27722 05	
563		7 19	8016 22	2097 75	36 10	797 53	2830 84	
345		2201 83	396905 14	95987 31	5599 77	24376 61	19972 67	
345			378074 96	98771 96	5668 42	23631 64	88164 45	
912		4103 02	1115691 19	275649 29	14168 10	70107 51	138692 01	
600		365665 46	14870326 81	8098851 17	10465541 49	70200 56	167264 77	19765 74

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	Total Project Costs	Spares	Special Tools & Gr. Equipment	Mobile Training Units	Actua Projec Costs
MANUFACTURING					
Direct Labor Hours	42690432	2409756	391156	4942	39884
Direct Labor Costs	8447371.81	471098.36	79488.13	1049.56	7595
Overtime Premium	506604.74	5622.50	1821.30	36.22	4991
Overhead	11061670.41	608875.57	98133.33	1169.62	10353
Raw Materials & Pur.Parts	7574337.55	1910354.31	70528.85	501.94	5592
Subcontract Costs	4448652.92	156228.44	347754.29	11913.88	3932
Excess Usage	292021.07				2920
Surplus and Obsolete	8722.92				872
Freight	36376.29				363
Rework	119659.87	585.56			11907
Program Costs	905588.48	341.50	1322.74		9039
Cancellation Costs	1893966.25				18939
Other Costs	515357.48	7278.48	683.81		50739
Fort Worth Activity	940800.66	90597.45			85020
Total Manufacturing	36451137.47	3250984.68	599722.45	14671.32	32585.7
SHIPPING					
Direct Labor Hours	409272	125566			2837
Direct Labor Costs	74606.71	22689.73			5191
Overtime Premium	1595.25	4.94			159
Overhead	103361.56	31644.49			717
Material & Other Costs	30089.12	9467.66			2062
Total Shipping	209652.64	63806.82			14584
PRODUCTION FLIGHT					
Flying Hours					
Direct Labor Hours	121679				1216
Direct Labor Costs	51670.39				5167
Overtime Premium	3901.73				390
Overhead	80976.37				8097
Gas & Oil	44264.04				4426
Other Costs	7597.05				759
Total Prod. Flight	188409.58				18840

EMENT OF ACCUMULATED COSTS Page 4 of 5

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28 February 1955

		2 YF - 102 (8-80)	8 YF - 102 (8-82)	4 F - 102A (8-90)	28 - ST F - 102A (8-10)	Other Costs Palmdale Operations	Flight Test Program	Instrumentation Program
78			112445390	12507041	7815831	83104	179852	55560
576			356877076	240691959	155014997	2004257	3859890	1125403
211			32776346	10106361	6322955	253469	598359	54721
189			498272086	318854644	191146568	26066929	4615046	189956
245		77541637	279598592	125093854	64413715	3409210	152823	9085424
631		18377135	159205927	97819425	117823765			52289
607		1060682	19151709	7487413	1502823			
294		24962	847922					
629		1624242	1665990	89242	159587	4450	9685	21928
431			8902472	2700735	3044224			
404			45450242	35062375	14875207		4000	600
625		11880	188981938	394126	8681			
719		3179612	32888191	7132988	2009953	5313361	40201	177413
321			78946178	5802939	271204			
902		101820135	1698560084	846234021	553833649	3705670	9164504	11910824
06		22321	115622	145	130	15363	130125	
698		592506	2070662	2666	2922	299977	2443965	
031		871	12591			149	146278	
707		561157	2907281	3508	3826	590346	3506089	
146		125665	441316	1703		45878	409584	
582		1110199	6407650	7877	5648	741692	6291516	
29			667			1740	119272	
039			53237			74737	5059965	
173			5012			7524	379637	
637			64527			180572	7852788	
404			224998			580553	3620851	
105			56389	689			355589	347038
258			581063	689		843388	17268780	347038

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STA

	Total Project Costs	Spares	Special Tools & Gr. Equipment	Mobile Training Units	Actua Projec Costs
INSPECTION					
Direct Labor Hours	632486	20560	729	157	601
Direct Labor Costs	140580 33	4508 70	171 98	36 41	1358
Overtime Premium	4570 04	6 20	21		45
Overhead	146109 47	4825 42	171 29	36 85	1410
Total Inspection	291259 84	9340 32	343 28	73 26	2815
D Division Costs	110057928 83	3402444 13	831532 90	8460689	105739 3
General Office Overhead	1493688 53	29178 83	7594 96	474 74	1436 4
Total Division Costs	111551617 36	3431622 96	839127 86	85081 63	107195 7
OTHER CONTRACT COSTS					
CAP Inventory	5836053 09				58360
Unreimbursable Costs	1259 25				12
Total	5837312 34				58373
TOTAL CONTRACT COSTS	117388929 70	3431622 96	839127 86	85081 63	1130330

INDUSTRIAL ACCOUNTING
PLANT II - Ext. 564
11 March 1955

MENT OF ACCUMULATED COSTS

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28 February 1955

	2 YF - 102 (8-80)	8 YF - 102 (8-82)	4 F - 102A (8-90)	28 - ST F - 102A (8-10)	Other Costs Palmdale Operations	Flight Test Program	Instrumentation Program
40	814	8277	118282	453665		17343	5359
324	18049	173322	2694777	10227007		399013	74156
363	124	237	118553	590333		6548	568
611	19105	195463	2783120	10624047		407040	78836
298	37278	369022	5596450	21441387		812601	153560
491	1711971106	3237915551	2214957109	2217548856	45902403	498509503	647129963
000	23300787	32944488	36896652	37617753	144639	6930541	7809140
491	1735271893	3270860039	2251853761	2255166609	46047042	505440044	654939103
309				583605309			
925	6694				1647	117584	
234	6694			583605309	1647	117584	
725	1735278587	3270860039	2251853761	2838771918	46048689	505557628	654939103

Distribution:

- Acker, D. B.
- Haas, W. W.
- Hendricks, A. L.
- Higgins, A. P.
- Hills, P. N.
- Jodka, J. J.
- Moseley, M. F.
- Nill, P. S.
- Osborn, P. G.
- Pederson, R. C.
- Van Horn, W. L.
- Wood, B. J.

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STATEMENT O

Contract

30

	Total Project Costs	Spares	Special Tools & Gr. Equipment	Mobile Training Units	Actua Proje Cost
ENGINEERING					
DESIGN AND LIAISON					
Direct Labor Hours	62371610		884673 ✓	206010	61280
Direct Labor Costs	1723487190		24025512	6021648	169344
Overtime Premium	114122396		1083148	299916	11273
Overhead	1475421162		21153692	5062353	1449205
Subcontract Costs	64274613			20748704	3752
Material & Other Costs	828452360		2045202 ✓	2002414	82440
Ground Support & Equip.	82920635				8292
Fort Worth Activity	4121357				412
Total	4292799707		48307554	40135095	420435
SERVICE PUBLICATIONS					
Direct Labor Hours	2329378				2329
Direct Labor Costs	52984118				5298
Overtime Premium	3457464				345
Overhead	55612756				5561
Subcontract Costs					
Material & Other Costs	18881188				1888
Total	130935526				13093
FIELD SERVICE REP.					
Direct Labor Hours	118680				118
Direct Labor Costs	3593833				359
Overtime Premium	150430				15
Overhead	659323				65
Travel & Per Diem, etc.	3981897				398
Total	8385483				838
EDWARDS - ENGINEERING					
Direct Labor Hours	4520002				4520
Direct Labor Costs	120325240				12032
Overtime Premium	7502370				750
Overhead	160027179				16002
Total	287854789				28785

ACCUMULATED COSTS

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June 1956

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t		2 YF - 102 (8-80)	8 YF - 102 (8-82)	4 YF - 102 (8-90)	28 - ST F - 102A (8-10)	Flight Test Program	Instrumentation Program	Design Deficiency
227		12883991	156022	7651836	17976229	7687132	14925717	
030		3587891.40	4212470	231157098	519354593	218403898	361462831	
392		19873270	272036	15226980	29155834	12565773	35645439	
117		289230977	3704310	179807035	429107433	188069192	357286170	
909		10323908	347068	956551	25392045	464288	42049	
684		75934291	31224213	41368833	50448741	247041684	378386972	
635						33465999	49454636	
351		32886	26015		1345556	883645	1833249	
058		754184472	39846112	468516497	1054804202	700894479	1186111296	
78		1295581		253185	180612			
118		28571546		6000889	18411683			
464		2214071		570666	872727			
756		30233606		5962680	19416470			
188		6164223		602665	12114300			
526		67183446		12936900	50815180			
80					118680			
833					3593833			
430					150430			
323					659323			
897					3981897			
483					8385483			
02				200	7877	1500274	3011651	
240				5072	222436	46301853	73795879	
370					47516	2432519	5022335	
179				7044	195305	52915776	106909054	
789				12116	465257	101659148	185727268	

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STATEMENT OF AC

Contract AF

30 Jun

	Total Project Costs	Spares	Special Tools & Gr. Equipment	Mobile Training Units	Actual Project Costs
EDWARDS - MANUFACTURING					
Direct Labor Hours	476206 5				476206
Direct Labor Costs	1101773 18				1101773
Overtime Premium	82622 61				82622
Overhead	1644719 73				1644719
Total	2829115 52				282911
HOLLOMAN - ENGINEERING					
Direct Labor Hours	140460 7				14046
Direct Labor Costs	397081 51				39708
Overtime Premium	14688 28				1468
Overhead	518034 10				51803
Total	929803 89				92980
HOLLOMAN - MANUFACTURING					
Direct Labor Hours	129393 1				12939
Direct Labor Costs	296654 75				29665
Overtime Premium	12650 56				1265
Overhead	504453 81				50445
Total	813759 12				81375
EXPERIMENTAL FLIGHT					
Flight Hours					
Direct Labor Hours	1315 3				131
Direct Labor Costs	7275 52				727
Overtime Premium	207 65				20
Overhead	5494 84				549
Material & Other Costs	3967 73				3967
Extra Risk Compensation	24500 00				2450
Total	77151 74				7715
EXPERIMENTAL FACTORY					
Direct Labor Hours	2590289 6			15	259028
Direct Labor Costs	5199166 55			334	519916
Overtime Premium	445577 94				44557
Overhead	6407011 43			368	64070
Subcontract Costs	124619 39				12461
Material & Other Costs	2485338 84				24853
Fort Worth Activity	15864 79				1586
Total	14677578 94			702	146775

UMULATED COSTS

3(600)-5942

e 1956

Page 2 of 5

	2 YF - 102 (8-80)	8 YF - 102 (8-82)	4 YF - 102 (8-90)	28 - ST F - 102A (8-10)	Flight Test Program	Instrumentation Program	Design Deficiency
5		180	13215	22700	4585316	90594	
18		3997	291510	1691779	106300801	1889231	
61			74690	123712	7951340	112519	
13		5844	528898	2458100	158304390	3174741	—
62		9841	895098	4273591	272556531	5176491	
7				16061	792378	596168	
51				413895	24240905	15053351	
28				24186	864756	579886	
10				592984	28836092	22374334	
389				1031065	53941753	38007571	
31		15	400	17515	1266823	9178	
175		344	9930	390747	29017335	247119	
256				31746	1227870	5440	
381		587	15657	690520	48861602	877015	
912		931	25587	1113013	79106807	1129574	
53	95				13058		
552	3265				724287		
765					20765		
484	7801				541683		
373	134891				3832482		
000					2450000		
174	145957				7569217		
81	14555759	595678	3773715	5245461	1292505	439763	
321	216294149	12532184	78327430	115451293	27898758	9412507	
794	33814919	1013764	4045533	2992229	2524908	166441	
775	355460717	15080382	96161438	130619070	32368224	11015944	
939	5881971	2240	2059883	4514095	3750		
884	95100252	3619087	40594335	89746518	17599092	1874600	
479	1372264			214215			
192	767924272	32247657	221193619	343537420	80394732	22459492	

[illegible]

STATEMENT O

Contract

3

	Total Project Costs	Spares	Special Tools & Gr. Equipment	Mobile Training Units	Actual Proje Costs
WIND TUNNEL					
Occupancy Hours	13280				13
Direct Labor Hours	759451				759
Direct Labor Costs	18813980				1881
Overtime Premium	885029				88
Overhead	9975499				997
Subcontract Costs	11831613				1183
Material & Other Costs	6276047				62
Total	47782168				4778
TOTAL ENGINEERING	6700498594		48307554	40135797	66120
TOOLING					
TOOL ENGINEERING					
Direct Labor-Hours	13341417	343695	27632		1297
Direct Labor Costs	3119849937	8210986	633652		3110
Overtime Premium	141445761	304445	5940		141
Overhead	2226205498	5906545	577373		2197
Subcontract Costs	325306600				325
Fort Worth Activity	569724456				569
Total	6497042252	14147976	1216965		6343
TOOL MANUFACTURING					
Direct Labor Hours	48920614	66000	22389		4883
Direct Labor Costs	10070709222	1421608	498156		10451
Overtime Premium	58228480	8978	980		582
Overhead	12324731170	1627605	557258		12302
Raw Mat'l & Pur. Parts	315079415	225514	✓ 166004		3146
Subcontract Costs	1769264436	1018800	✓ 1557682		1743
Other Costs	1956867381	125831	384781		1951
Fort Worth Activity	2659957741				2659
Total	32514609072	4428336	3164861		32438
PLANT ENGINEERING					
Direct Labor Hours	3975986	560	160		397
Direct Labor Costs	855060665	11967	3201		854
Overtime Premium	19680381		754		19
Overhead	1060731111	13974	3944		1060
Material & Other Costs	1486929333				1486
Total	3422240147	25941	7899		3422
TOTAL TOOLING	42434053017	18602253	4389725		42204

ACCUMULATED COSTS

F 33(600)-5942

June 1956

1 st		2 YF - 102 (8-80)	8 YF - 102 (8-82)	4 YF - 102 (8-90)	28 - ST F - 102A (8-10)	Flight Test Program	Instrumentation Program	Design Deficiency
280		10665		360	1450		805	
451		547605		117998	64938		28910	
3980		12973510		3258412	1687147		894911	
5029		544009		299292	114015		17713	
5499		7110368		422352	1792018		670761	
1613		11831613						
6047		428892		2099633	3720702			
2168		32888392		5989689	7320702		1583385	
5243		16 22326539	72104541	709569506	14 63360430	13 04499150	14 40195077	
090			2818109	2213404	7763278	86658	88641	
5299			66368067	53482915	187173186	193944	2041187	
9376			4604134	2389496	7012371	101807	1568	
1580			46064221	37379983	132530884	2108087	1698405	
0600			32530600					
2456			46929832		9435655		606969	
9311			196496854	93252394	336152096	4147838	4288129	
2225		782112	13198765	11975242	22763914	71998	40194	
1158		14253893	257787318	246149601	484532451	1573829	854066	
8522		587766	16672859	16732167	24132182	89467	4081	
8307		17541626	330850367	307103328	572015011	1782969	995006	
7897		3610790	192735438	41038202	76157683	1060007	65777	
4954			54846942	17605787	101897225			
6126		159228	30209475	67761504	96402326	226016	417577	
5741			214739417		51120594		135730	
7705		36153303	10 97861816	696390589	14 06259472	4732288	2472237	
5266		9676	3218605	91482	313594	341909		
90897		189400	68890892	1971812	6823681	7615112		
67284		719	1150419	12176	109781	694189		
55193		220183	80928039	2251769	108115030	11840172		
92933			55950657	1091784	78643830	13006662		
06307		410302	206920007	5327541	96392322	33156135		
13323		36563605	15 01278677	794970524	18 38801890	42038261	6760366	

STATEMENT O

Contract

	Total Project Costs	Spares	Special Tools & Gr. Equipment	Mobile Training Units	Actu Proje Cost
MANUFACTURING					
Direct Labor Hours	7,618,201.3	411,864.6	81,736.7	1,665.7	7 122 9
Direct Labor Costs	15,047,434.04	822,428.59	175,494.59	3,461.65	14 046 0
Overtime Premium	815,184.20	9,893.60	1,985.77	56.39	803 2
Overhead	19,142,229.24	1,035,534.09	203,851.03	4,117.64	17 898 7
Raw Mat'l & Pur. Parts	16,759,026.89	6,108,206.07	625,462.67	37,948.40	9 987 4
Subcontract Costs	8,479,198.19	388,869.46	737,730.30	15,758.30	7 337 6
Excess Usage	665,899.22				665 8
Surplus & Obsolete	1,182,812.44				1 182 8
Freight	83,333.36	1,365.13			81 9
Rework	358,132.28	2,302.98			355 8
Program Costs	4,847,653.52	341.50	1,322.74		4 845 9
Cancellation Costs	3,370,986.30				3 370 9
Other Costs	734,475.41	32,267.86	3,773.05	1,184.24	697 2
Fort Worth Activity	1,084,384.02	102,974.35		19.17	981 3
Total Manufacturing	72,571,549.11	8,504,183.63	1,749,620.15	62,545.79	62 255 1
SHIPPING					
Direct Labor Hours	108,150.5	61,933.6			46
Direct Labor Costs	199,235.18	114,400.65			84 8
Overtime Premium	1,926.34	609.23			1 3
Overhead	269,428.27	153,607.11			115 8
Material & Other Costs	69,229.87	32,719.00			36
Total Shipping	539,819.66	301,335.99			238 4
PRODUCTION FLIGHT					
Flight Hours					15 8
Direct Labor Hours	15,890.6				63 6
Direct Labor Costs	63,620.04				3
Overtime Premium	3,884.31				152
Overhead	152,029.77				111
Gas & Oil	111,671.99				2
Other Costs	2,701.75				333
Total Prod. Flight	333,907.86				
PALMDALE - ENGINEERING					
Direct Labor Hours	16,598.7				16
Direct Labor Costs	39,280.72				39
Overtime Premium	4,370.21				4
Overhead	91,599.28				91
[illegible]	135,250.21				135

ACCUMULATED COSTS

AF 33(600)-5942

0 June 1956

		2 YF-102 (8-80)	8 YF-102 (8-82)	4 YF-102 (8-90)	28-ST F-102A (8-10)	Flight Test Program	Instrumen- tation Program	Design Deficiency
4.3			1,904,419.5	1,271,553.5	3,604,115.2	32,400.9	7,985.0	302,460.2
49.21			3,524,288.25	2,450,977.82	7,323,531.34	71,726.16	16,104.82	659,420.82
8.44			325,059.00	102,458.31	306,963.94	4,574.62	408.65	63,783.92
26.48			4,878,322.25	3,242,267.29	8,931,919.86	81,571.00	20,001.22	744,644.86
09.75		637,827.15	2,218,410.70	1,220,760.49	5,013,433.07	1,255.44	28,757.58	866,965.32
40.13		193,581.54	1,598,628.06	850,208.44	4,693,478.64		770.39	973.06
99.22		10,606.82	189,913.75	65,384.27	399,994.38			
12.44		22,713.92	537,900.79	369,673.94	252,573.79			
68.23		31,232.90	32,442.99	3,758.04	14,315.02		219.28	
29.30			99,561.79	62,309.88	193,957.63			
89.28		2,583,813.58	535,327.10	807,620.09	919,182.51	40.00	6.00	
86.30		118.80	466,710.31	2,896,907.23	7,249.46			
50.26		25,886.90	315,191.54	48,048.66	287,999.99	2,401.75	11,030.59	6,690.83
90.50			784,982.88	59,197.99	99,689.06	5,267.58	31,851.28	401.71
99.54		3,505,781.61	15,506,739.41	12,179,572.95	28,444,238.69	166,836.56	109,149.81	2,342,880.52
16.9		2,975.8	20,581.5	114.0	5,218.0	17,327.6		
34.53		5,314.66	37,457.00	212.51	9,786.23	32,064.13		
17.11		11.48	141.20		25.05	1,139.38		
21.16		7,450.27	51,496.06	280.79	12,985.76	43,608.28		
10.87		1,557.99	21,346.50	34.62	2,561.05	11,004.71		
83.67		14,334.40	110,440.76	527.92	25,364.09	81,816.50		
90.5			113.7		2,052.8	13,724.0		
20.04			541.14		8,351.70	54,727.20		
84.31			46.44		799.10	3,038.77		
29.77			1,125.82		14,540.23	136,363.72		
71.99			2,490.87		45,785.44	63,395.68		
01.75			563.89			2,137.86		
07.86			4,768.16		69,476.47	259,663.23		
98.7					3,282.4	852.1	12,464.2	
80.72					9,500.24	2,228.83	27,551.65	
70.21					699.51	229.48	3,441.22	
99.28					19,201.03	4,777.72	67,620.53	
50.21					29,400.78	7,236.03	98,613.40	

STATEMENT C

Contract

3

	Total Project Costs	Spares	Special Tools & Gr. Equipment	Mobile Training Units	Actua Proje Cost
PALMDALE - MANUFACTURING					
Direct Labor Hours	286,849.5		240.7		286,6
Direct Labor Costs	642,414.19		536.60		641,8
Overtime Premium	58,838.25		128.40		58,7
Overhead	1,430,665.56		1,314.93		1,429,3
Total Palmdale Mfg.	2,131,918.00		1,979.93		2,129,
INSPECTION					
Direct Labor Hours	546,141.7	14,962.7	2,185.5	534.9	528,4
Direct Labor Costs	1,224,533.59	32,418.93	5,073.38	1,222.80	1,185,8
Overtime Premium	46,548.97	325.38	31.08	73.14	46,1
Overhead	1,349,194.01	36,924.70	5,393.18	1,312.46	1,305,5
Material	3,084.66				3,0
Fort Worth Activity	1,487.14	45.88			1,4
Total Inspection	2,624,848.97	69,714.89	10,497.64	2,608.40	2,542,0
Division Costs	187,776,332.76	9,061,257.04	2,289,070.51	466,512.16	175,959,4
General Overhead	3,010,357.87	70,809.56	24,782.32	3,048.57	2,911,
Total Division Costs	190,786,690.63	9,132,066.60	2,313,852.83	469,560.73	178,871,
OTHER CONTRACT COSTS					
CAP Inventory	2,264,189.79				2,264,1
Unbillable Costs	98,689.63	31.54			98,6
Total	2,362,879.42	31.54			2,362,8
TOTAL CONTRACT COSTS	193,149,570.05	9,132,098.14	2,313,852.83	469,560.73	181,234,

Cost Accounting Department
Works Accounting Section
Plant II, Ext. 564
S.D.R. 10-6-1
10 July 1956

F. ACCUMULATED COSTS
AF 33(600)-5942
June 1956

1 ct s	2 YF - 102 (8-80)	8 YF - 102 (8-82)	4 YF - 102 (8-90)	28 - ST F - 102A (8-10)	Flight Test Program	Instrumentation Program	Design Deficiency
08 9	4 532 2	26 605 1	11 415 9	158 208 7	26 673 7	2 923 3	56 249 9
77 59	10 230 31	59 646 31	26 639 38	356 957 29	56 523 27	6 610 06	125 270 97
09 85		1 759 26	2 442 26	31 309 61	7 045 28	386 34	15 767 10
50 63	24 759 05	143 919 37	62 364 20	743 806 41	143 097 77	12 557 39	298 846 44
38 07	34 989 36	205 324 94	91 445 84	1 132 073 31	206 666 32	19 553 79	439 884 51
58 6	298 5	3 619 9	17 897 9	482 332 1	16 691 2	7 619 0	
18 48	659 27	7 733 39	40 360 08	1 081 079 35	38 486 94	17 499 45	
19 37	1 22	146 32	1 614 76	42 232 27	1 176 36	948 44	
63 67	737 13	8 940 58	44 202 92	1 191 692 96	41 118 45	18 871 63	
84 66				3 084 66			
41 86				1 007 44	101 24	333 18	
28 04	1 397 62	16 820 29	86 177 76	2 319 096 68	80 882 99	37 652 70	
93 05	20 145 404 43	31 577 925 74	27 403 124 77	65 041 273 22	14 274 475 73	14 734 524 13	2 782 765 03
17 42	241 074 30	359 762 63	401 592 59	1 347 177 50	246 972 95	250 667 90	64 469 55
10 47	20 386 478 73	31 937 688 37	27 804 717 36	66 388 450 72	14 521 448 68	14 985 192 03	2 847 234 58
89 79			2 264 189 79				
58 09	41 371 05	185 07	3 762 13	40 655 58	12 653 53	30 73	
47 88	41 371 05	185 07	2 267 951 92	40 655 58	12 653 53	30 73	
58 35	20 427 849 78	31 937 873 44	30 072 669 28	66 429 106 30	14 534 102 21	14 985 222 76	2 847 234 58

Distribution:

Acker, D. B.
Blakely, J. S.
Burrows, D. C.
Herbig, J. R.
Higgins, A. P.
Hills, P. N.
Jodka, J. J.
Johnson, E. E.
Mc Manus, R. H.
Moseley, M. F.
Mrvichin, M. M.
Osborn, P. G.
Thetford, J. W.
Wood, B. J.

Report 9-11-4
50

Summarization of Model 8 Accumulated Program Costs

Contracts AF 33(600)-5942 33(600)-23903 ~ 1 Static Test + 45 Model 8 Airplanes
93

June 30, 1953 13.

Page 1 of

		Contract AF 33(600)-5942				Contract AF 33(600)-
		Total	Prototypes	Production		Trainer
Mfg.	Factory Production:					
	Labor Hours	740376 4	576991 2	163385 2		198 5
	Labor Costs	1380507 78	1,077,612 48	302,895 30		363 98
	O/T Premium	138514 86	116,402 66	22,112 20		2 83
	Overhead	1753142 16	1,354,988 90	398,153 26		484 34
	Material	611735 12	466,550 18	145,184 94		
	Subcontract	62769 28	34,191 35	28,577 93		
	Other Costs	38463 89	36,353 09	2,110 80		
	Total	3985133 09	3,086,098 66	899,034 43		851 15
Eng.	Engineering:					
	Labor Hours	891556 2	876729 4	14826 8		3424 9
	Labor Costs	2481704 22	2,438,402 66	43,301 56		11,976 11
	O/T Premium	130708 57	128,153 00	2,555 57		440 35
	Overhead	1934011 78	1,901,225 21	32,786 57		7,577 86
	Material	112693 87	109,396 98	3,296 89		
	Subcontract					
	Other Costs	39300 20	39,020 20	280 00		
	Total	4698418 64	4,616,198 05	82,220 59		20,016 32
Tool	Tool Engineering:					
	Labor Hours	138059 0	1264 7	136794 3		
	Labor Costs	323838 19	3388 02	320,450 17		
	O/T Premium	26384 64	70 33	26,314 31		
	Overhead	222381 10	1843 98	220,537 12		
	Material	200 66	102 00	98 66		
	Subcontract	13410 32	2004 93	11405 39		
	Other Costs					
	Total	586214 91	7409 26	578805 65		-0-
Tool	Tool Manufacturing:					
	Labor Hours	731049 7	204,559 9	526489 8		-0-
	Labor Costs	1402758 73	390,607 83	1,012,150 90		
	O/T Premium	112005 00	42,464 10	69,540 90		
	Overhead	1775838 40	493,338 89	1,282,499 51		
	Material	664354 08	184,729 71	479,624 37		5 32
	Subcontract	12560 21	4,237 66	8,322 55		
	Other Costs	102390 23	36,350 02	66,040 21		
	Total	4069807 15	1,151,738 21	2,918,068 94		5 32

Report 9-11-9

Summarization of Model 8 Accumulated Program Costs
Contracts AF 33(600)-5 42 + AF33(606)-22903 ~ [illegible] 445 Model 8 Airplanes
June 30, 1953
Page 2 of 2

	Contract #AF33(600)-5942				Contract #AF33(600)-2
	Total	Prototypes	Production		Trainer
Eng Flight:					
Labor Hours	95	95			
Labor Costs	32 65	32 65			
O/T Premium					
Overhead	78 01	78 01			
Material	1299 71	1,299 71			
Subcontract					
Other Costs	9 27	9 07			
Total	1419 64	1,419 64	-0-		-0-
Eng Wind Tunnel:					
Labor Hours	332377	33,2377			80
Labor Costs	76018 30	76,018 30			30 24
O/T Premium	2547 98	2,547 98			2 51
Overhead	50725 11	50,725 11			
Material	3477 94	3,477 94			
Subcontract	51785 13	51,785 13			
Other Costs					
Total	184554 46	184554 46			32 75
Transfers from Other Divisions	249470 53	36 10	249,434 43		
Other Contract Costs					
Unreimbursable Costs	66 94	66 94			
Labor & Vac. Accrual	186800 00	108,900 00	77,900 00		
G.O.M. Inventory	775578 72	319,101 90	456,476 82		
Instrumentation	3572 86	3,572 86			
Total	966018 52	431,641 70	534,376 82		-0-
Total Division Costs	14741036 94	9,479,086 08	5,261,950 86		20905 54
General Office C/A	177,191 87	113795 54	63,396 33		277 54
Total Costs inc. G.O. C/A	14918228 81	9,592,881 62	5,325,347 19		21,183 08

2903

Do not Copy

Contract AF33(600)-5942

Trial Balance Total		14,884,355 28
G.O. Ovhd. for Statement	183,303 83	
Less G.O. Booked	143,318 34	
G.O. Overhead for June		39,985 49
		14,924,340 77

Contract AF 33(600)-23903

Trial Balance Total		20,983 91
G.O. Ovhd for Statement	277 54	
Less G.O. Booked	78 37	
G.O. Ovhd for June		199 17
		21,183 08

Statement of Accumulated Costs

Contract AF 33[illegible]25042 – (2) Prototype [illegible] Airplanes

June 30, 1953 SCHEDULE A Page 1 of 2

	Total	Airplanes	Mockup & Proofing	Flight Test Program	Wind Tunnel Test Program
Factory Production:					
Labor Hours	576,991.2	320,741.2	66,935.3	153.0	72,619.9
Labor Costs	1,277,612.48	598,337.24	121,576.71	282.52	137,463.40
O/T Premium	116,402.66	76,235.55	4,845.65	24.06	16,177.27
Overhead	1,354,988.90	781,813.47	147,295.53	367.80	161,141.41
Material	466,550.18	313,147.77	20,460.95	1,698.21	32,793.01
Subcontract	34,191.35	34,004.54			124.00
Other Costs	36,353.09	15,908.46	153.29	4.04	52.78
Total	3,286,098.66	1,819,447.03	294,332.13	2,376.63	347,751.89
Engineering:					
Labor Hours	876,729.4	691,361.0	19,913.6	33,604.2	21,680.1
Labor Costs	2,438,403.66	1,938,555.32	59,265.62	95,367.12	60,947.89
O/T Premium	128,153.00	99,303.62	3,244.72	6,376.45	2,331.75
Overhead	1,901,225.21	1,497,586.17	42,508.61	74,327.69	46,985.47
Material	109,396.98	3,760.80	853.77	12,583.62	2,023.99
Subcontract					
Other Costs	39,020.30	15,810.38	17.52		
Total	4,616,198.05	3,555,016.77	105,889.82	188,604.89	112,292.10
Tool Engineering:					
Labor Hours	1,264.7	898.2	118.5	5.5	
Labor Costs	3,328.02	2,485.92	316.08	11.88	
O/T Premium	70.33	70.33			
Overhead	1,843.98	1,333.51	171.23	7.76	
Material	100.00	100.00			
Subcontract	2,004.93	2,004.93			
Other Costs					
Total	7,409.26	5,994.69	487.31	19.64	-0-
Tool Manufacturing:					
Labor Hours	204,559.9	184,893.0	1,113.4		1,030.2
Labor Costs	390,607.83	352,976.29	2,055.57		1,925.65
O/T Premium	42,444.10	37,946.20	27.51		143.33
Overhead	493,356.79	448,905.44	2,411.13		2,349.16
Material	184,722.97	158,896.1	2,480.72		2,050.17
Subcontract	4,237.66	4,237.66			
Other Costs	36,350.02	28,604.72	506.64		5,422.60
Total	1,151,728.21	1,03[illegible]	7,461.57	-0-	11,588.91

90	91	92	93	94	96	51-95
Misc. Development Tests	Structural & Proofing Tests	Power Plant Tests	Control System Tests	Cabin Pressure Tests	Armament & Pneumatic Tests	Other Contract Costs (1)
31,6724	509105	99206	16,5337	61405	1,3641	
5985010	96,09902	18,80834	31,32950	11,37306	2,55257	
366739	8,72216	1,64733	3,13217	1,60308	34800	
69,34417	11366281	23,47798	39,55451	14,98282	3,32840	
48,98845	12,97547	8,31847	27,09575	1,07210		
784	1289	1782	436	1990		
2098051	9401					
201,95846	231,56636	5226994	10111629	29,05096	6,22897	-0-
540513	389761	56854	43915	31594	990	3,8078
142,08116	95,46173	16,96551	11,21586	8,61043	25146	9,68066
8,18519	5,82451	1,13764	74589	58368	1382	41053
116,93515	84,87923	12,58193	973866	701671	21968	8,44951
36,05637	1465778	15,32531	15,51056	8,66049	211	1217
02,19230						
326,45017	200,82325	46,00539	37,21097	24,86531	48707	1855281
2055	210	160				
49729	4517	3168				
27582	2964	2602				
77311	7481	5770	-0-	-0-	-0-	-0-
5,3766	3,2793	3,0641	66859	1008	166	
10,17216	6,29625	5,94110	12,86974	18981	3126	
35216	34076	42328	1,18495	3075	1514	
11,19571	7,17204	7,37662	15,80933	24595	4051	
5,72902	7,51665	2,14092	1,91589	23		
45212	2760	132984	850			
27,90117	21,35330	17,21176	31,78841	46674	8691	-0-

Statement of Accumulated Costs

Contract AF 3( )00)-5942 ~ 2 Prototype Model 8 Airplanes

June 30, 1953 SCHEDULE A Page 2 of 2

	Total	Airplanes	Mockup & Proofing	Flight Test Program	Wind Tunnel Test Program	D
Flight:						
Labor Hours	95	95				
Labor Costs	3265	3265				
O/T Premium						
Overhead	7801	7801				
Material	129971	129971				
Subcontract						
Other Costs	927	927				
Total	141964	141964	-0-	-0-	-0-	
Wind Tunnel:						
Labor Hours	333397				33,2377	
Labor Costs	7601830				76,01830	
O/T Premium	254798				2,54798	
Overhead	5072511				50,72511	
Material	347794				3,47794	
Subcontract	5178513				51,78513	
Other Costs						
Total	18455446	-0-	-0-	-0-	18455446	
Transfers From Other Div	3610	3610				
Other Contract Costs						
Unreimbursable Costs.	6694					
Labor & O'h'd Accrual	10890000					
L.C.M. Inventory	31910190					
Instrumentation	357286					
Total	431,64170					
Total Division Costs	9479,08608	6415,48517	405,17053	191,00116	656,48734	
General Office O.H.	113,79554					
Total Costs Inc. G.O.O.H.	9592,88162					
	16927924	11979029	[illegible]	3376277	12856779	

(1) Other con
(a) Handl
(b) Preparing D

Misc. evelopment Tests	Structural & Proofing Tests	Power Plant Tests	Control System Tests	Cabin Pressure Tests	Armament & Pneumatic Tests	Other Contract Costs (1)
-0-	-0-	-0-	-0-	-0-	-0-	-0-
-0-	-0-	-0-	-0-	-0-	-0-	-0-
557082 91	453,817 72	115,544 79	170,115 67	54,383 01	6,807 95	18,552 81
91,305 8	93,186 9	18,686 1	27,611 1	94,007	14,797	3,807 8

Costs include:

& Manuals 17,303 05

ts for M.T.U.C. Conference 1,249 76

Analysis of Accumulated Tooling & Engineering Costs
Contract AF 33( )-5942 - 2 Prototype Model 8th Airplanes
June 30, 1953 SCHEDULE B

	Total Airplanes	Original Design	Correction of Eng. Errors	Correction of Tooling Errors	Product Improvements
Engineering					
Labor Hours	691361 0	419173 8	8444 1	456 7	397 5
Labor Costs	1938555 30	1,157998 69	17,535 01	926 14	864 12
O/T Premium	99303 62	64201 31	1,764 24	102 65	74 31
Overhead	1497586 17	905336 85	18,731 14	1013 41	882 05
Material	3760 80	1383 85	360 86	1 32	4 24
Subcontract					
Other Costs	15810 38	14959 08			
Total	3555016 27	2,143849 78	38391 25	2043 54	1824 76
Tool Engineering					
Labor Hours	898 2	898 2			
Labor Costs	2485 92	2485 92			
O/T Premium	70 33	70 33			
Overhead	1333 51	1333 51			
Material	102 00	102 00			
Subcontract	2004 93	2004 93			
Other Costs					
Total	5996 69	5996 69	-0-	-0-	-0-
Tool Manufacturing					
Labor Hours	184893 0	184669 5	7 0		93 0
Labor Costs	352976 29	352537 56	13 17		182 33
O/T Premium	39946 22	39899 70	98		7 15
Overhead	448908 44	448364 52	17 08		226 92
Material	158896 11	158,901 44	9 49		
Subcontract	4237 66	3,957 64			
Other Costs	28604 72	28,510 95		90 09	
Total	1033569 44	1,032,171 83	40 72	90 09	416 30
Transfers fr. Oth. Div.	36 10	36 10			
Grand Total	4594619 50	3,182,054 40	28431 97	2,133 63	2241 06
	877152 2	604741 5	8451 1	456 7	490 5

stomer equested Changes	Tooling Improvements	Liaison Tool Maint. + Repair	Eng. Work Not Resulting In Eng. Releases	Changes Due To Failure of Vendor Item	Other
164087		161281	230,1232	2289	
52,65247		4541671	66256544	60266	
26,3310		412349	26,37577	2875	
36,41091		35,78825	498,92129	50227	
			72227		1,31826
			851,30		
91,69648	-0-	8532245	118943607	113368	1,31826
-0-	-0-	-0-	-0-	-0-	-0-
1060		55	180		
20183		1059	3091		
3650		189			
24400		1200	4392		
		1482			
					28000
	368				
48233	368	966	7483	-0-	28000
92,17881	368	8533211	1,189,51090	113368	1,59826
16,5687		161336	2301412	2289	

Statement of Accumulated Costs

Contract AF 33(600)-742 ~ 1 Static Test + 40 Production Model F Airplanes

June 30, 1953 SCHEDULE C Page 1 of 2

9,17,324,760 50451 53

	Total Cost	Airplanes	Spare Parts	Mock up + [illegible]	Flight Test Program
Factory Production:					
Labor Hours	163,385.2	72,210.4	99.4	15,587.9	2,268.6
Labor Costs	302,895.30	131,063.80	180.05	28,685.66	7,458.73
O/T Premium	22,112.20	7,236.59	11.92	2,204.69	571.29
Overhead	398,153.26	176,188.10	243.02	38,034.48	5,034.82
Material	145,184.94	123,139.89		4,965.37	
Subcontract	28,577.93	28,063.71			
Other Costs	2,110.80	2,110.96			
Total	899,034.42	467,802.59	434.99	73,890.20	13,064.84
Engineering:					
Labor Hours	14,836.8	6,148.4			
Labor Costs	43,301.56	18,639.23			
O/T Premium	2,555.57	1,336.35			
Overhead	32,786.57	13,643.30			
Material	3,296.89	103.29			
Subcontract					
Other Costs	280.00				
Total	82,220.59	33,722.47	-0-	-0-	-0-
Tool Engineering:					
Labor Hours	136,794.3	133,958.0	1,081.0	40.0	
Labor Costs	320,450.17	314,175.40	2,304.06	87.10	
O/T Premium	26,314.31	25,842.97	216.10	9.01	
Overhead	220,537.12	215,925.30	1,757.70	65.04	
Material	98.66	98.66			
Subcontract	11,405.39	11,405.39			
Other Costs					
Total	578,805.65	567,447.72	4,277.86	161.15	-0-
Tool Manufacturing:					
Labor Hours	526,489.8	518,682.2	820.2	209.0	
Labor Costs	1,012,150.90	997,028.80	1,581.53	398.93	
O/T Premium	69,540.90	68,440.13	20.07		
Overhead	1,282,499.51	1,263,448.96	2,001.29	509.96	
Material	479,524.37	474,936.79	554.97		
Subcontract	8,372.55	8,372.55			
Other Costs	66,040.71	63,991.18		125.75	
Total	2,918,078.94	2,876,168.41	4,157.81	1,034.64	-0-

56	90	[illegible]	92	93	[illegible]
Special ols & Ground uipment	Misc. Development Tests	Static Test Program	Power Plant Test Stand	Missile ring Test Program	Other Contract Costs(1)
1647	811	268681	459508	1430	110
30727	14583	49,22523	85,54819	26302	1752
	1203	251393	9,49616	6559	
40187	19789	65,55816	112,11996	34892	2684
1466	2,38488	9,20422	546258		1334
		51422			
72386	274063	127,01576	212,62689	67753	5170
8,5814		970			
24,42106		24127			
1,20575		1347			
18,92803		21524			
3,19360					
	28000				
47,74844	28000	46998	-0-	-0-	-0-
		8404	8749		
		197846	1,90315		
		1772	22851		
		136649	1,42259		
	-0-	336267	355425	-0-	-0-
	5	12622	4917		240
	95	12,14974	94519		4576
		1,05801	2269		
	122	15,27977	1,19975		5856
1,11482	245	2,69937	15793		5609
	17135	80175	79235		15833
1,11482	17597	71,98864	3,11791	-0-	21874

Statement of Accumulated Costs

Contract AF33(6)-5942 – 1 Static Test & 40 [illegible]oduction Model [illegible] Airplanes

June 30, 1953 SCHEDULE C — Page 2 of 2

	Total	Airplanes	Spares	Mockup & Proofing	Flight Test Program
Flight:					
Labor Hours					
Labor Costs					
O/T Premium					
Overhead					
Material					
Subcontract					
Other Costs					
Total	– 0 –	– 0 –	– 0 –	– 0 –	– 0 –
Field Service					
Labor Hours					
Labor Costs					
O/T Premium					
Overhead					
Material					
Subcontract					
Other Costs					
Total	– 0 –	– 0 –	– 0 –	– 0 –	– 0 –
Transfers From Other Div	249,434 43	249,434 43			
Other Contract Costs:					
Labor & Build Accrual	77,900 00				
G.O.M. Inventory	456,476 82				
Total	534,376 82				
Total Division Costs	5,261,950 86	4,194,575 62	88,726 61	75,085 99	13,064 04
General Office O'hd	63,396 33				
Total Costs Inc. G.O. O'hd	5,325,347 19				
	8414961	[illegible]	20008	[illegible]	22466

(1) Other contrac

(a) Manufact

(b) Manufac

Special ls+Ground Equipment	Misc. Development Tests	Static Test Program	Power Plant Test Stand	Missile Firing Test Program	Other Contract Costs (1)
-0-	-0-	-0-	-0-	-0-	-0-
-0-	-0-	-0-	-0-	-0-	-0-
49,589 06	3196 60	1,628,37 05	2,19,299 05	677 53	376 44

t costs include:

ure of special tools of 376 03

ers of special parts of 41

8,746 1	81 6	3406 77	47,317 4	1430	350

Analysis of Accumulated Tooling & Engineering Costs
Contract AF33(600)-[illegible]942 - 1 Static Test + 40 Production Model [illegible] Airplanes

June 30, 1953 SCHEDULE D

	Total Airplanes	Original Design	Correction of Eng. Errors	Correction of Tooling Errors	Product Improvements
Engineering:					
Labor Hours	6148.4	324.0			
Labor Costs	18639.23	890.09			
O/T Premium	1336.35	52.55			
Overhead	13643.30	718.96			
Material	103.29				
Subcontract Other Costs					
Total	33722.17	1661.60	-0-	-0-	-0-
Tool Engineering					
Labor Hours	133958.0	117541.4	8833.1	1350.7	73.0
Labor Costs	314,175.40	277795.98	19670.20	2963.93	150.20
O/T Premium	35842.97	22102.40	2259.57	259.19	
Overhead	215,925.30	189,235.12	14362.51	2196.24	118.70
Material	98.66	98.66			
Subcontract	11405.39	11405.39			
Other Costs					
Total	567447.72	500637.65	36,292.28	5,419.36	268.90
Tool Manufacturing					
Labor Hours	518682.2	480739.4	25565.6	7778.7	1139.7
Labor Costs	997028.80	924,539.83	48,968.69	14,706.89	2,216.86
O/T Premium	68440.13	63,922.20	3,114.20	962.56	1,09.75
Overhead	1,263448.90	1,170,992.61	62,370.48	18,959.10	2778.86
Material [illegible]	474936.79	455,268.44	11,028.80	5,834.14	52.67
Subcontract	8322.55	8,322.55			
Other Costs	63991.18	60130.20	2835.57	958.31	
Total	2,876,168.41	2,683,175.93	128,317.74	41,421.00	5,158.17
Transfers from Other A/c	235343.98	235,343.98			
Total Tooling & Eng Costs	3712682.28	3420819.16	164610.02	46840.36	5427.07
Total Hours	658788.6	598604.8	34401.7	9129.4	1212.7

tomer ested anges	Tooling Improvements	Liaison Tool Maint. + Repair	Production Facilities	Other
		58244		
		1774914		
		128380		
		1292434		
				10329
-0-	-0-	31,95728	-0-	10329
263	80	61255		
5119	1974	13,52426		
	988	121173		
4137	1301	995835		
9256	4263	24,69484	-0-	-0-
834	227	15881	17616	
16421	4257	291269	3,44706	
		33139		
20350	5539	387496	4,21406	
299		6028	2,68947	
762		5938		
37832	2796	726870 ✓ [illegible]	1035059	-0-
47088	14059	6392037	1035059	10329
1097	307	13,5390	17616	

Statement of Accumulated Costs

Contract AF 3[illegible]600)-23903 — 3 Tris[illegible] Model 8 Airplanes

June 30, 1953 SCHEDULE E Page 1 of 2

	Total	Airplanes	Mockup	Wind Tunnel Test Program
Factory Production:				
Labor Hours	198.5		186.5	12.0
Labor Costs	363.98		341.66	22.32
O/T Premium	2.83			2.83
Overhead	484.34		455.06	29.28
Material				
Subcontract				
Other Costs				
Total	851.15	-0-	796.72	54.43
Engineering:				
Labor Hours	3424.9	3424.9		
Labor Costs	11,976.11	11,976.11		
O/T Premium	440.35	440.35		
Overhead	7599.56	7599.86		
Material				
Subcontract				
Other Costs				
Total	20016.32	20016.32	-0-	-0-
Tool Engineering:				
Labor Hours				
Labor Costs				
O/T Premium				
Overhead				
Material				
Subcontract				
Other Costs				
Total	-0-	-0-	-0-	-0-
Tool Manufacturing				
Labor Hours				
Labor Costs				
O/T Premium				
Overhead				
Material	5.32	5.32		
Subcontract				
Other Costs				
Total	5.32	5.32	-0-	-0-

Statement of accumulated Costs

Contract AF 33(60[illegible])23903 – 3 Trainer M[illegible]del 8 Airplanes

June 30, 1953 SCHEDULE E Page 2 of 2

	Total	Airplanes	Mockup	Wind Tunnel Test Program
Flight:				
Labor Hours				
Labor Costs				
O/T Premium				
Overhead				
Material				
Subcontract				
Other Costs				
Total	-0-	-0-	-0-	-0-
Wind Tunnel:				
Labor Hours	80			80
Labor Costs	30 24			30 24
O/T Premium	2 51			2 51
Overhead				
Material				
Subcontract				
Other Costs				
Total	32 75	-0-	-0-	32 75
Total Division Costs	20,905 54	20,021 64	796 72	87 18
G. O. Overhead	277 54			
Total Inc. G.O. Overhead	21,183 08			
	3,631.4	3,424.9	186.5	20.0

Report 9-11-4

Statement of Accumulated Costs

Contract AF33(600)-5[illegible] 1 Static Test & 42 [illegible] S-MX1554 Airplanes

January 31, 1953

	Total Cost	Airplanes	Mockups	Handbooks and Manuals	Flight Test Program	Wind T Test
Production:						
Hours	165482.7	12341.2	46482.8		17.9	434
Labor	308931.02	23922.90	83879.35		37.18	820
O/T Prem	20686.77	1508.19	4059.32		-0-	81
O'h'd	361912.65	32345.33	99339.06		44.86	919
Material	104496.05	58493.68	13129.33		-0-	77
Subcontract	10650.66	25.00	-0-		-0-	
Other	1507.30	1364.79			-0-	
Total	808184.45	117659.89	200407.06	-0-	82.04	1900
Engineering:						
Hours	480930.9	387053.3	17517.6	102.0	3381.2	12.6
Labor	1343746.93	1098589.27	51044.89	209.06	10319.77	226
O/T Prem	51958.93	39832.45	2807.64	12.56	6.62	10
O'h'd	1075947.18	867241.45	37372.58	277.85	2732.50	280
Material	36993.40	1841.72	282.10	-0-	.80	7
Subcontract	11100.00	-0-	-0-	-0-	-0-	
Other	20198.23	8198.23	-0-	-0-	-0-	
Total	2539721.67	2015703.12	91607.21	599.47	18059.69	625
Tool Engineering						
Hours	26222.7	25593.5	100.0		5.5	
Labor	63930.15	62361.84	282.44		11.88	
O/T Prem.	693.88	693.88	-0-		-0-	
O'h'd.	46172.52	45133.26	141.15		7.76	
Material		-0-	-0-		-0-	
Subcontract		-0-	-0-			
Other		-0-	-0-			
Total	110796.55	108188.98	423.59	-0-	19.64	—
Tool & Manufacturing						
Hours	71760.8	59289.3	102.4			4
Labor	137056.00	114124.31	194.13			8
O/T Prem.	6203.98	5183.43	27.50			
O'h'd.	181067.22	154489.07	232.06			9
Material	79440.58	63435.70	1164.45			12
Subcontract	675.77	675.77	-0-			-
Other	6545.74	1790.63	59.14			38
Total	410989.29	339698.91	1677.28	-0-	-0-	70

						Development and [illegible]		
	Special Tools & Ground Equip	[redacted]	Costs See Note #1		Misc [illegible] Tests	Structural & Proofing Tests	Power [illegible] Tes[illegible]	[illegible]al Systems Tests
22			48205		219625	316382	233[illegible]	24768
563			843960		4156389	5982728	44[illegible]	474352
277			2058		173436	484682	21[illegible]	15813
394			1317442		4634601	6821864	51[illegible]	540767
578			8281		1989211	299070	97[illegible]	114724
000			0		1055784	0	17[illegible]	0
78			0		5262	3711	[illegible]	0
030	0		2771741		12014683	13592055	1078[illegible]	1145706
53	15491		2288		367493	205386	783[illegible]	3427
264	467016		68258		7123373	5066562	2595[illegible]	84343
005	16377		1486		547098	256744	50[illegible]	3210
300	351717		62325		8223751	4604206	19[illegible]	89612
35	319360		0		1426330	998319	6228[illegible]	34
	0		0		1110000	0		0
	0		0		1200000	0	0	0
404	1154470		132069		21649552	10925853	10789[illegible]	177199
			2972		2055	210		
			73193		47729	4477		
			0		0	0		
			58489		27582	2964		
			0		0			
			0					
			0		0			
	0		131682		77311	7441	0	0
84			8613		50076	22027	563[illegible]	27806
495			167051		947966	422685	1091[illegible]	541378
449			15636		28442	3874	30[illegible]	39827
329			235393		1036194	458645	136[illegible]	[illegible]72797
962			120756		445258	648504	31[illegible]	113011
			0		0	0	0	0
438			15833		52356	2760	9[illegible]	
173	0		554669		2510216	1536468	289[illegible]	367053

Statement of Accumulated Costs

Contract AF 33(600) 942 1 Static Test + 42 Model 8-MX1554 Airplanes

January 31, 1953

Page 2

	Total Cost	Airplanes	Mockup	Handbooks and Manuals	Flight Test Program	Wind T Test Pr
Flight:						
Hours	9 5	9 5				
Labor	32 65	32 65				
O/T Prem.	-0-	-0-				
O'h'd.	78 01	78 01				
Material	1299 71	1299 71				
Subcontract	-0-	-0-				
Other	9 27	9 27				
Total	1419 64	1419 64	-0-	-0-	-0-	-
Wind Tunnel:						
Hours	22837 3					228
Labor	49740 61					497
O/T Prem.	857 25					8
O'h'd.	32081 12					320
Material	1961 23					19
Subcontract	51518 93					515
Other	-0-					-
Total	136164 14	-0-	-0-	-0-	-0-	1361
Other Contract Costs						
Labor & O'h'd Accrual	179800 00					
G.&M. Inventory	353051 34					
Total	532851 34					
Grand Total	4540130 08	2582670 54	294115 14	599 47	18161 37	3957
G.O. Ovhd	41393 16					
Total	4581523 24					
Total Hours	76674 39					

Note 1: Other contract

Budget total
Other Contract Costs
G.O. Ovhd for Jan.
Less Roundage

		[redacted]			Development and Tests				
…l …m	Special Tools + Ground Equipt		Costs See Note #1		Misc. Devel. Tests	Structural & Proofing Tests	Power … Tests	[redacted]	…trol System Tests
	-0-		-0-		-0-	-0-	-0		-0-
23									
061									
725									
112									
623									
893									
414	-0-		-0-		-0-	-0-			-0-
021	11544 70		29901 61		362517 62	260618 17	2447		6899 58

…osts include: (a) Manufacture of special tools of $293 86
(b) Manufacture of special static test assemblies 287 06
(c) Preparing data for M.T.U.C. Conference $1,320.

40403090 00
532851 34
83641 6
45815245 0
1 26
45815232 4

Trial Balance Total		$457315
GO Overhead for Statement	$413931 6	
Less G.O. Overhead Booked	330290 00	
G.O. Overhead for January		836
		$458152

January 1953

W. O.	G.O. Overhd.	Total	Corrected Balance		Hours	
5140	11044 85	1370478 14	1359433 31		258971 8	
5240	1729 62	305122 77	303393 15		58639 4	
5141	12 30	2551 18	2538 88		479 0	
5241	9 48	8707 89	8698 41		1772 7	
5142	13	176 82	176 69		34 7	
5242	3 21	328 16	324 95		89 5	
5243	1 30	169 40	168 10		39 5	
5144		2729 39	2729 39		491 6	
5244	34	22 64	22 30		6 5	
5145		3 68	3 68			
5245	52	37 54	37 02		8 0	
5146	44	500 34	499 90		88 5	
5246	2 28	517 57	515 29		104 4	
5147	7032 92	288449 42	281416 50		150914 2	
5248	10 82	2435 17	2424 35		209 4	
5149	2 99	432 95	429 96		81 9	
Sub Total	19851 20	2482713 08	2462861 88		471936 1	
5100	2 03	53939 71	53937 68		45 1	
5101	250 53	50764 48	50513 95		10629 4	
5111	1 99	2172 45	2170 46		451 0	
5137	30 03	9805 80	9775 77		730 9	
5200	1 01	786 62	785 61		33 6	
5201	3 94	1459 36	1455 42		311 8	
5239	1 63	1171 40	1169 77		148 7	
Sub Total	20142 36	2602812 90	2582670 54		484286 8	
5150	3157 76	297272 90	294115 14		64207 8	
5151		599 47	599 47		102 0	
5153	157 18	18318 55	18161 37		3406 6	
5155	3466 28	399245 49	395780 21		79820 7	W.T. Hs. 447.5
5158	19 76	4935 49	4915 73		327 0	
5258	43 33	6672 30	6628 97		1222 1	
5166		179800 00	179800 00			
5270	07	293 93	293 86		17 0	
5272	74 11	28361 17	28287 06		5962 0	
5290		103 00	103 00			
5190	2982 98	365397 60	362414 62		63924 9	
5191	2609 73	263227 90	260618 17		54400 5	
5192	139 75	24610 08	24470 33		3685 1	
5195	14 87	1335 56	1320 69		222 8	
5193	220 82	27120 40	26899 58	G.O.M. Inv.	5600 1	
Total	33029 00	4220107 74	4187078 74	353051 34	767191 4	-447.5 W.T.
				4540130 08	766743 9	←

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Statement of Accumulated Cost

Contract AF33(600)-[illegible]2 42 Model 8-MX1554 [illegible] One Static Test Airplanes

December 31, 1952

	Total Cost	Airplanes	Mockup	Flight Test Program	Wind Tunnel Test Program
Production:					
Hours	1430926	48818	432848	149	395209
Labor	265459.11	9221.23	77920.38	27.27	74262.39
O/T Prem.	18448.37	331.05	4062.89	-0-	7453.64
Ov'hd	296917.32	11206.42	89750.43	30.89	80521.43
Material	101031.03	57396.63	12451.26	-0-	6601.90
Subcontract	10650.66	25.00	-0-	-0-	50.00
Other	1319.69	1177.18	-0-	-0-	52.78
Total	693826.18	79357.51	184184.96	59.16	168942.14
Engineering:					
Hours	4267959	3414194	173946	29292	116662
Labor	1202920.67	980309.07	50659.80	8700.69	29955.35
O/T Premium	44710.72	33592.25	2784.52	6.62	894.96
Ov'hd	918669.95	734599.35	36782.87	6410.14	25111.16
Material	34234.01	1792.34	380.98	.80	283.50
Subcontract	11100.00	-0-	-0-	-0-	
Other	17191.64	5191.64	-0-	-0-	
Total	2228826.99	1755484.65	90808.19	15118.25	56244.97
Tool Engineering:					
Hours	164315	160225	1000	55	
Labor	41836.89	40831.88	282.44	11.88	
O/T Prem.	18.89	18.89	-0-	-0-	
Ov'hd	25305.24	24717.70	141.17	7.76	
Material	-0-	-0-	-0-	-0-	
Subcontract	-0-	-0-	-0-	-0-	
Other	-0-	-0-	-0-	-0-	
Total	67161.02	65568.47	423.61	19.64	-0-
Tool Manufacturing					
Hours	371061	274710	894		3845
Labor	70141.60	51820.86	159.52		729.25
O/T Prem.	2326.36	1688.07	30.01		84.53
Ov'hd	83195.30	63207.32	180.25		774.10
Material	45541.69	20839.45	1164.45		1151.27
Subcontract	426.94	426.92	-0-		-0-
Other	5660.85	1113.19	59.14		3845.26
Total	207092.72	149695.81	1593.37	-0-	6585.11

					Development and Tests		
Tools + Equip.	Mfg. Special Tools	Special Static Test Assemblies	Data for MTVC Conference	Misc Devel. Tests	Struct. + Proof Tests	Power Plant Tests	Control System Tests
		10632		209609	293647	19323	20691
		174539		3952560	5518301	363661	393723
		-0-		168649	459683	18656	13091
		262823		4329517	6122498	399279	426698
		416		1972161	290007	96549	98991
		-0-		1055784	-0-	1782	-0-
		-0-		5262	3711		-0-
-0-		437778		11483933	12394200	879927	932503
2093			2288	329887	182727	5690	1179
61039			68258	8151164	4526178	189600	33337
12625			1486	493860	230619	3768	879
58341			57933	7131233	3952007	129821	27306
19360			-0-	1328405	907840	622000	34
			-0-	1110000	-0-		-0-
			-0-	1200000	-0-		-0-
51365		-0-	127677	19414662	9616644	945189	61556
		770		2055	210		
		16863		49729	4477		
		-0-		-0-	-0-		
		13313		27583	2965		
		30176		77312	7448	-0-	-0-
	10			48776	21447	2580	18809
	# 174			922197	411035	49143	360752
	248			28382	3872	98	20023
				998746	440895	53038	410684
		22557		426218	647874	30695	111356
				-0-	-0-	-0-	-0-
				52356	2760	9210	-0-
		22557		2427899	1506386	142184	902817

Not put into mockup for statement purposes

Type all

Statement of Accumulated Costs

December 31, 1952

	Total Cost	Airplanes	Mockup	Flight Test Program	Wind Tunnel Test Program	Spec & Gen
Flight:						
Hours	9.5	9.5				
Labor	32.65	32.65				
O/T Prem.	-0-	-0-				
Ovhd.	78.01	78.01				
Material	750.40	750.40				
Subcontract	-0-	-0-				
Other	9.27	9.27				
Total	870.33	870.33	-0-	-0-	-0-	
Wind Tunnel:						
Hours	20875.2				20875.2	
Labor	45458.93				45458.93	
O/T Prem.	742.75				742.75	
Ovhd.	25842.23				25842.23	
Material	1128.41				1128.41	
Subcontract	51321.57				51321.57	
Other	-0-				-0-	
Total	124493.89	-0-	-0-	-0-	124493.89	
Other Contract Costs						
Labor & Ovhd. accrual	79000.00					
G.F.M. Inventory	186879.22					
Total	265879.22					
Grand Total	3588350.35	2050376.77	277010.13	151960.05	356266.11	9
G C Overhead	33007.00					
Total	3621357.35					

Budget Total	3349528.00
G.C. Overhead (Dec)	5952.13
Other Contract Costs	265879.22
	3621359.35
Less Roundage	2.00
	3621357.35

Total Hours 644310.8

				Development and Tests			
Tools d Equip.		Special Static Test Assemblies	Data for M.T.U.C. Conference	Misc. Devel Tests	Structural & Proof Tests	Power Plant Tests	Control System Tests
-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
513 65	-0-	4905 11	1276 77	334038 06	235246 72	19673 00	18968 76

Trial Balance Total		3615405 22
G.O. Overhead for Statement	33007 00	
Less G.O. Overhead booked	27054 87	
G.O. Overhead for December		5952 13
		3621357 35

December 1952

W. O.	G.O. Overhead	Total	Corrected Balance	Hours	
5140	8784 89	1139536 77	1130751 88	219194 1	
5240	713 23	141429 99	140716 76	29436 9	
5141	3 33	1071 12	1067 79	202 5	
5241	2 20	656 57	654 37	154 5	
5142		13 22	13 22	2 0	
5242	2 69	232 62	229 93	60 0	
5243	26	87 39	87 13	21 0	
5244	34	22 64	22 30	6 5	
5145		3 68	3 68	-0-	
5245		34 40	34 40	8 0	
5146	18	38 37	38 19	7 5	
5246	41	150 97	150 56	36 7	
5147	6005 20	698949 33	692944 13	135515 9	
5248	10 82	2435 44	2424 62	209 4	
5149	2 99	283 83	280 84	57 9	
Total	15526 54	1984946 34	1969419 80	384912 9	
5100	4 29	53966 79	53962 50	41 0	
5101	80 87	18179 99	18099 12	4174 9	
5111	23	136 60	136 37	31 5	
5139	19 40	7480 31	7460 91	539 9	
5200	25	777 24	776 99	16 6	
5201		277 81	277 81	60 6	
5239	42	243 69	243 27	26 8	
Total	15632 00	2066008 77	2050376 77	389804 2	
5150	2920 43	279926 34	277005 91	60867 8	
5153	126 03	15322 08	15196 05	2949 6	
5155	3086 29	359352 40	356266 11	72872 9	W.T. 426 0 Hrs.
5158	16 90	5171 88	5154 98	371 0	
5258	43 33	4402 00	4358 67	838 3	
5270		4 22	4 22	1 0	Mockups.
5272		4905 11	4905 11	1140 2	
5190	2662 31	334597 37	331935 06	59032 7	
5290		103 00	103 00		
5191	2281 67	237528 39	235246 72	49803 1	
5192	116 73	19789 73	19673 00	2759 3	
5193	169 18	19137 94	18968 76	4067 9	
5195		1276 77	1276 77	227 8	
Total	27054 87	3349526 00	3322471 13	644736 8	
5166		79000 00	79000 00	426 0	Less W.T. Hrs.
		3428526 00	3401471 13	644310 8	

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Statement of Accumulated Costs

Contract AF (600)-5942 42 - Model MX1554 airplanes

November 30, 1952

	Total Cost	Airplanes	Mockups	Flight Test Program	Wind Tunnel Test Program
Production:					
Fact. Prod. Hours	1278953	19892	398356	137	363815
" " Labor	23759892	378034	7188957	2500	6834297
" " O/T Premium	1724488	16942	405402	-0-	711964
" " Overhead	25937775	405590	8122400	2793	7278901
" " Material	9905721	5584391	1223363	-0-	651303
Subcontract Costs	1062566		-0-	-0-	5000
Other Prod. Costs	120971	106720	-0-	-0-	5278
Total	62311413	6491677	16940122	5293	15486745
Engineering:					
Engineering Hours	3757922	2981160	171926	24512	105784
" Labor	106881970	86638678	5005417	710515	2697451
" O/T Premium	3841853	2822142	277477	662	77016
" Overhead	78962559	62505215	3647143	519984	2235660
" Material	2210233	169401	38098	80	28350
Subcontract Costs	1110000		-0-	-0-	-0-
Other Prod. Costs	519164	519164	-0-	-0-	-0-
Total	193525779	152654600	8968135	1231241	5038477
Tool Engineering:					
Tool Eng. Hours	97395	94075	1000	5.5	
" " Labor	2653077	2569439	28244	1188	
" " O/T Premium	684	684	-0-	-0-	
" " Overhead	1373477	1328036	14117	776	
" " Material			-0-		
Subcontract Costs			-0-		
Other Tool Eng. Costs			-0-		
Total	4027238	3898159	42361	1964	-0-
Tool Manufacturing:					
Tool Mfg. Hours	196726	108563	884		3845
" Labor	3770615	2094902	15778		72995
" " O/T Premium	127328	74154	2753		8453
" " Overhead	4010216	2213577	18025		77410
" " Material	3441077	2045784	116445		100588
Subcontract Costs			-0-		-0-
Other Tool Mfg Costs	566085	111319	5914		384526
Total	11915321	6539736	158915	-0-	643972

	Development and Tests			
Tools & Equipment	Misc Devel Tests	Structural & Proof Tests	Power Plant Tests	Control System Tests
	196622	262449	18102	119580
	3709072	4933228	340554	373250
	161469	397050	18568	13091
	4008478	5351284	369095	399234
	1962574	289722	95677	98691
	1055784	-0-	1782	-0-
	5262	3711	-0-	-0-
-0-	10902639	10974995	825676	884266
11653	294513	164284	3470	620
348890	7243250	4100441	119463	17865
11998	439946	209849	1884	879
247201	6235563	3485030	73611	13152
319360	1207055	398055	49800	34
-0-	11100000	-0-	-0-	-0-
-0-	-0-	-0-	-0-	-0-
927449	16235814	8193375	244758	31930
	2055	210		
	49729	4477		
	-0-	-0-		
	27583	2965		
	-0-	-0-		
	-0-	-0-		
	-0-	-0-		
-0-	77312	7442	-0-	
	47803	20617	2480	12534
	903923	393724	47251	242042
	26121	3774	98	11975
	974695	420377	50566	255566
	407924	654189	15248	100899
	-0-	-0-	-0-	-0-
	52356	2760	9210	-0-
-0-	2365019	1474824	122373	610482

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Statement of Accumulated Cost
Contract AF (600)-5942 42 - Mode 8-XF1554 airplanes
November 30, 1952

	Total Cost	Airplanes	Mockup	Flight Test Program	Wind Tunnel Test Program	Sp Gro
Flight:						
Flight Hours	95	95				
" Labor	32.65	32.65				
" % Premium						
" Overhead	78.02	78.02				
" Material	475.85	475.85				
Subcontract Costs						
Other Flight Costs	9.27	9.27				
Total	595.79	595.79				
Wind Tunnel:						
Wind Tunnel Hours	1924.51				1924.51	
" " Labor	41877.61				41877.61	
" " % Premium	698.86				698.86	
" " Overhead	19097.01				19097.01	
" " Material	1112.73				1112.73	
Subcontract Costs	51321.38				51321.38	
Other Wind Tun Costs					-0-	
Total	114107.59				114107.59	
Other Contract Costs						
Labor + Overhead Accrual						
Total						
Grand Total	2834500.89	1696437.51	261095.33	12384.98	325799.53	
General Office Overhead	27054.87					
Total	2861555.76					
Project Budget						

Note: The total cost shown abo
$111,025.17 of G.O.M. Stores n
use on the Model 8

G.O.M. Stores	111025.17	
Budget total		286
Less Roundage		
		286

		Development and Tests		
Tools & nd Equipt	Misc Devel Tests	Structural & Proof Tests	Power Plant Tests	Control System Tests
927449	29580784	20650636	1192807	1526678

Trial Balance Total	297258093
Less Inventory Material	11102517
Statement Total	286155576

e does not include
aterial purchased for
oject.

155760
324
155576

297258093

November

W. O.	G.O. Overhead	Total	Corrected Balance	Hours	
5140	878489	95888252	95009763	1844255	
5240	71323	6934566	6863243	138002	
5141	333	32916	32578	645	
5241	220	16906	16686	425	
5242	269	19831	19562	520	
5243	26	1864	1838	50	
5244	34	2264	2230	65	
5145		368	368		
5146	18	1416	1398	35	
5246	41	3682	3641	80	
5147	600520	61467950	60807430	1197048	
5248	1082	243544	242462	7094	
5149	299	28383	28084	579	
			163029283	3183798	
5100	429	5403572	5403143	400	
5101	8087	652088	644001	15648	
5111	23	1823	1800	45	
5139	1940	488425	486485	3763	
5200	25	77617	77592	49	
5239	42	11190	11148	82	
5150	292043	26461574	26109533	572166	
5153	12603	1251101	1238498	24704	occupancy
5155	308629	32885347	32576718	669749	3740
5158	1690	493272	491582	3270	
5258	4333	440200	435867	8383	
5190	266231	29836715	29570484	540993	
5290		10300	10300		
5191	228167	20878803	20650636	447560	
5192	11673	1204480	1192807	24052	
5193	16918	1543596	1526678	32734	
Supplements					
5140		9701	9701		
5155		3235	3235		
	2705487			5527396	

Tool & Equip	Misc. Development Tests	Structural and Proof Tests	Power Plant Tests	Control System Tests
	1605 97	2192 03	166 37	176 35
	29919 39	41041 84	3118 10	3321 84
	1059 04	3162 40	173 48	117 01
	32017 82	43709 08	3317 41	3516 43
	17539 99	2392 35	771 07	994 55
	10557 84	-0-	17 82	-0-
	52 62	37 11	-0-	-0-
-0-	91146 70	90342 78	7391 88	7949 83
83 83	2631 17	1388 76	10 00	6 20
2503 05	64403 87	34977 02	381 00	178 65
77 31	3813 62	1748 33	2 51	8 79
1757 91	55961 44	29122 29	209 70	130 01
-0-	5035 23	3504 13	588 00	34
-0-	11100 00	-0-	-0-	-0-
-0-	-0-	-0-	-0-	-0-
4338 27	139414 16	69351 82	1181 21	317 79
	20 55	80		
	492 29	14 00		
	-0-	-0-		
	270 95	10 99		
	-0-	-0-		
	-0-	-0-		
	-0-	-0-		
-0-	768 24	24 99	-0-	-0-
	434 68	203 17	22 40	60 20
	8150 09	3866 91	422 14	1134 62
	214 42	37 54	98	15 53
	8667 52	4051 22	446 66	1200 39
	2943 52	6278 02	152 48	591 80
	-0-	-0-	-0-	-0-
	344 43	27 60	92 10	-0-
-0-	20319 98	14261 27	1114 36	2942 34

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STATEMENT OF ACCUMULATED COST

CONTRACT AF33(6[illegible])-5942 AIRPLANES 42 MODEL [illegible]-MX1554 SCHEDULE

DATE October 31, 1952

	Total Cost	Airplanes	Mock-up	Flight Test Program	Wind Tunnel Test Program
Production					
Factory Production Hours	1011475	4162	270086	78	323077
Factory Production Labor	18592831	71633	4275652	1341	6004088
Factory Prod. O/T Premium	1216625	1059	151682	-0-	612691
Factory & Div.Adm.O'H	201046740	82990	5385516	1555	6320605
Factory Prod. Material	8813989	5174762	867070	-0-	602361
Subcontract Cost	1062566		-0-	-0-	5000
Other Production Costs	75310	61059	-0-	-0-	5278
Total	49808061	5391503	11179920	2896	13550023
Engineering:					
Engineering Hours	2973812	2330910	120562	16950	93394
Engineering Labor	94438743	67915371	3434608	480070	2364330
Eng. O/T Premium	2606294	1828138	147914	-0-	65186
Eng. & Div. Adm. O'H	61645760	48183455	2528185	355442	1950543
Eng. Material	1122743	191486	18487	-0-	-0-
Subcontract Costs	1110000		-0-	-0-	-0-
Other Eng. Costs	315030	315030	-0-	-0-	-0-
Total	151238570	118433480	6129194	835512	4380059
Tool Engineering:					
Tool Eng. Hrs.	51409	48559	660	55	
Tool Eng. Labor	1506619	1433900	20402	1188	
Tool Eng. O/T Premium			-0-	-0-	
Tool Eng. &Div.Adm.O'H	705219	667201	9068	756	
Tool Eng. Material			-0-	-0-	
Subcontract Costs			-0-	-0-	
Other Tool Eng. Costs			-0-	-0-	
Total	2211834	2101101	29470	1944	-0-
Tool Manufacturing:					
Tool Mfg. Hours	97083	21013	180		3845
Tool Mfg. Labor	1828912	396488	3126		71922
Tool Mfg. O/T Premium	41953	6773	-0-		8333
Tool Mfg. & Div.Adm.O'H	1934987	418999	3589		25820
Tool Mfg. Material	1603702	393951	116207		96962
Subcontract Costs			-0-		-0-
Other Tool Mfg. Costs	377917	59429	3284		268791
Total	5789471	1275640	126206	-0-	521828

Form SA 2-1

Sub-Total Hrs(Do Not Type)

Sub-Total Amt(Do Not Type)

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STATEMENT OF ACCUMULATED COSTS

CONTRACT AF33(600)3942 AIRPLANES 42 MODEL B-MX1554 SCHEDULE

DATE October 31, 1952

	Total Cost	Airplanes	Mock-up	Flight Test Program	Wind Tunnel Test Program	Spec Gov
Flight:						
Flight Hours	9 5	7 5				
Flight Labor	32 65	32 65				
Flight O'time Premium						
Flight & Div. Adm. O.H.	80 28	80 28				
Flight Material						
Subcontract Costs						
Other Flight Cost	9 27	9 27				
Total	122 20	122 20				
Wind Tunnel Hours	17109 5				17109 5	
Wind Tunnel Labor	36760 85				36760 85	
Wind Tunnel O'T Premium	597 11				597 11	
Wind Tunnel & Div. Adm. O'H	18207 55				18207 55	
Wind Tunnel Material	1083 23				1083 23	
Subcontract Costs	33794 12				33794 12	
Other Wind Tunnel Costs					-0-	
Total	90442 86				90442 86	
Field Service						
Field Service Hours						
Field Service Labor						
Field Service O'T Premium						
Field Service Overhead						
Field Service Material						
Subcontract Costs						
Other Field Service Costs						
Total						
Other Division Transfers						
Other Contract Costs						
Model T-29 Common Tooling						
Leasing Tool Purchasing						
Integral Fuel Tank Tooling						
Labor & Overhead Accrual	88100 00					
P.P. Parts Sold to Rohr						
Total	88100 00					
GRAND TOTAL	2269124 46	1272139 44	174647 90	8403 52	274961 96	
Inventory Material	2956 77					
TOTAL HOURS (Do Not Type)	43049 69					

[illegible] 3-2

	Development + Test			
Tools + l Equip	Misc Developmt Tests	Structural and Proof Tests	Power Plant Test	Control System Tests
133827	25164908	17398088	769345	1120996

Typed ok

STATEMENT OF ACCUMULATED COSTS

CONTRACT AF 33(600)-5942 AIRPLANES 42 MODEL 8-[illegible]1554 SCHEDULE

DATE October 31, 1952

	Total Cost
General Office Overhead	
Provision for Warranty	
Total (Inc. G.O. O'H Warranty)	
Project Budget	
General Office Overhead	1945964
Provision for Warranty	
Total ~~Budget~~	2288584 10

Budget Reconciliation

Budget Total	2195491 -
G. O. Overhead for Oct.	4994 85
Labor + Ovhd Accrual	88100 00
	2288585 85
Less Roundage	1 75
	2288584 10

Form SA 2-3

Trial Balance Total		228654602
G.O. Ovhd for Statement	1945964	
Less G.O. Ovhd Booked	1446479	
G.O. Ovhd for Oct.		499485
		229154087
Less Inventory Material		295677
Statement Total		228858410

October

W.O.	G.O. Overhead 682	Total	Correct Balance	Hours
5100	288	5096499	5096211	798
5101	80	53870	53790	1378
5110		3100	3100	80
5139	696	231970	231274	2032
5140	4859.63	217612.22	21275259	1396120
5240	13303	2357040	2343737 13418994	53580 14497000
5141		284	284	—0—
5241	183	16471	16288 16572	420 420
5242	238	19566	19328	520
5145		368	368	—0—
5246	37	3648	3611	80
5147	330191	481751.84	47844995	947409
5248	64	241584	241520	2094
5149		7279	7279	179
5200	11	76169	76158	29
5239		742	742	20
			127213944	2404739
5150	74208	17538998	17464790	391488
5153	4618	844970	840352	17083
5155	211229	27707425	27496196	594476
5158	20.86	435913	433827	8383
5166			8810000	
5190	173202	253381.10	25164908	469237
5191	136032	17534120	17398088	378476
5192	7264	976609	969345	19877
5193	6786	1127782	1120996	24275
	1446479		226912446	* 4308034

* Total Hours	4308034
Less Wind Tunnel Hours	3065
Correct Total	4304969

STATEMENT OF ACCUMULATED CO

CONTRACT AF 33(600)5942 AIRPLANES 42 MODEL B-MX1554 SCHEDULE

DATE September 30, 1952

	Total Cost	Airplanes	Mock-up (5150)	Flight Test Program (5153)	Wind Tunnel Test Program (5155)	Spec Gro
Production						
Factory Production Hours	66132.7	226.6	8805.3	7.8	25697.6	
Factory Production Labor	123104.15	371.85	15422.38	13.41	47507.42	
Factory Prod. O/T Premium	7484.67	4.77	192.79	0	4682.77	
Factory & Div.Adm.O'H	131408.44	450.26	17496.13	15.50	49876.73	
Factory Prod. Material	54100.00	30746.14	4420.63	0	5212.77	
Subcontract Cost	10628.44	0	0	0	52.78	
Other Production Costs	548.09	458.36	0	0	0	
Total	327273.79	32031.38	37531.93	28.91	107332.47	
Engineering:						
Engineering Hours	237655.9	186120.2	7590.9	1007.0	8351.4	
Engineering Labor	681611.28	550351.16	21996.00	2697.94	21094.40	
Eng. O/T Premium	17861.98	11893.24	773.98	0	573.61	
Eng. & Div. Adm. O'H	490109.75	382487.79	15880.16	2106.64	17392.77	
Eng. Material	8525.25	1255.19	0	0	0	
Subcontract Costs	11100.00	0	0	0	0	
Other Eng. Costs	3146.76	3146.76	0	0	0	
Total	1212354.52	949134.14	38650.14	4804.58	39060.78	
Tool Engineering:						
Tool Eng. Hrs.	3283.0	3029.0	43.0	5.5		
Tool Eng. Labor	10290.42	9628.52	152.73	11.88		
Tool Eng. O/T Premium	0	0	0	0		
Tool Eng. &Div.Adm.O'H	4493.03	4155.79	59.00	7.55		
Tool Eng. Material	0	0	0	0		
Subcontract Costs	0	0	0	0		
Other Tool Eng. Costs	0	0	0	0		
Total	14783.45	13784.31	211.73	19.43		
Tool Manufacturing:						
Tool Mfg. Hours	6034.3	327.4	17.5		196.0	
Tool Mfg. Labor	11363.97	619.94	30.36		863.13	
Tool Mfg. O/T Premium	77.62	0	0		33.48	
Tool Mfg. & Div.Adm.O'H	11981.85	650.54	34.72		381.17	
Tool Mfg. Material	9828.91	754.62	882.15		646.24	
Subcontract Costs	0	0	0		0	
Other Tool Mfg. Costs	3499.87	594.29	1.81		2558.77	
Total	36752.22	2619.39	949.09		3982.79	
[illegible]						
Sub-Total Hrs (Do Not Type)						
Sub-Total Amt (Do Not Type)						

	Development & Tests			
Tools & d Equip.	Misc. Development Tests	Structural and Proof Tests	Power Plant Tests	Control System Tests
(158)	(5190)	(5191)	(5192)	(5193)
	119212	174540	15627	10575
	2220044	3266447	292770	199148
	33697	206130	16767	3840
	2368236	3468111	310509	210126
	1081894	145590	45472	99088
	1055784	-0-	1782	-0-
	5262	3711	-0-	-0-
	6764919	9089989	467900	512207
4565	233937	106172	580	610
127867	5690478	2689167	22098	17568
4038	325482	131714	-0-	879
95500	4882676	2221118	12134	12761
-0-	396635	324147	6190	34
-0-	1110000	-0-	-0-	-0-
-0-	-0-	-0-	-0-	-0-
227405	12405271	5366148	40422	31242
	2055			
	49729			
	-0-			
	27069			
	-0-			
	-0-			
	-0-			
	76798			
	32304	18825	140	36615
	604681	358612	2636	69125
	873	3152	98	291
	641879	374052	2782	72824
	284806	418205	7131	44448
	-0-	-0-	-0-	-0-
	31740	2760	-0-	-0-
	1563999	1156781	12647	186688

STATEMENT OF ACCUMULATED COSTS

CONTRACT AF33(600)-5942 AIRPLANES 42 MODEL 8 - MX1554 SCHEDULE

DATE September 30, 1952

	Total Cost	Airplanes	Mock-ups	Flight Test Program	Wind Tunnel Test Program	Spec. & G
Flight:						
Flight Hours	95	95				
Flight Labor	32 65	32 65				
Flight O'time Premium	0	0				
Flight & Div. Adm. O.H.	78 85	78 85				
Flight Material	0	0				
Subcontract Costs	0	0				
Other Flight Cost	9 27	9 27				
Total	120 77	120 77				
Wind Tunnel Hours	153480				153480	
Wind Tunnel Labor	32581 27				32581 27	
Wind Tunnel O'T Premium	536 85				536 85	
Wind Tunnel & Div. Adm. O'H	15049 09				15049 09	
Wind Tunnel Material	429 58				429 58	
Subcontract Costs	33338 67				33338 67	
Other Wind Tunnel Costs	0				0	
Total	81935 46				81935 46	
Field Service						
Field Service Hours						
Field Service Labor						
Field Service O'T Premium						
Field Service Overhead						
Field Service Material						
Subcontract Costs						
Other Field Service Costs						
Total						
Other Division Transfers						
Other Contract Costs						
Model T-29 Common Tooling						
Lansing Tool Purchasing						
Integral Fuel Tank Tooling						
Labor & Overhead Accrual	89400 00					
P.P. Parts Sold to Rohr						
Total	89400 00					
GRAND TOTAL	1762420 21	997689 99	77347 89	4852 92	232311 50	
TOTAL HOURS (Do Not Type)	(3290634)					

[illegible] 3-2

Tools and Equip	Misc Development Test	Structural and Proof Test	Power Plant Tests	Control System Tests	
227405	20810967	13612918	13612918	720369	730132

Note: Wind tunnel labor incorrectly charged to W.O. 5140 has been transferred by prior years journal to the correct W.O. 5155. Transferred in Sept. 1952

STATEMENT OF ACCUMULATED COSTS

CONTRACT AF 33(600)-5942 AIRPLANES 42 MODEL 8-[illegible]x 1554 SCHEDULE

DATE September 30, 1952

General Office Overhead	1451729
~~Provision for Warranty~~	
Total ~~(Inc. G.O. O'H Warran~~	1772137.50
Project Budget	
General Office Overhead	
Provision for Warranty	
Total ~~Budget~~	

Trial Balance Total		1774574 35
GO Overhead for Statement	14517 29	
Less G.O. Overhead Booked	11954 14	
G.O. Overhead for Sept		2563 15
		1777137 50

September

September

W O	G.O. Overhead 682	Total	Correct Balance
5100	315	3041507	3041192
5139	265	125809	125544
5140	689233	95812180	95122947
5200	11	74263	74252
5240	99.42	14150.06	1405064
			99768999 ✓
5150	500.55	7784844	7734789 ✓
5153	3020	488312	485292 ✓
5155	1912.26	23422376	23231150 ✓
5158	1470	228875	227405 ✓
5166		8940000	8940000 ✓
5190	146319	20958756	20812437 less 14.70 to be charged from W.O. 5170 in October.
5191	94200	13707118	13612918 ✓
5192	6615	726984	720369 ✓
5193	2743	732875	730132 ✓
	1195414		176262021 ✓

Total Hours	3293264
Less Wind Tun. Hours	2630
	3290634 ✓

STATEMENT OF ACCUMULATED COST

CONTRACT AF33(600)5942 AIRPLANES 42 MODEL MX 1554 SCHEDULE

see last month's copy

DATE August 31, 1952

	Total Cost	Airplanes	Mock-ups (5150)	Flight Test Program (5153)	Wind Tunnel Test Program (5155)	Spe Grou (5
Production						
Factory Production Hours	53269.7	123.7	5430.2	7.8	23951.5	
Factory Production Labor	98167.02	198.07	9401.52	13.41	44227.92	
Factory Prod. O/T Premium	5968.67	0	174.22	0	4344.61	
Factory & Div. Adm. O'H	103534.84	242.93	10664.91	15.32	45958.56	
Factory Prod. Material	31704.50	18077.74	1817.93	0	4358.20	
Subcontract Cost	10575.66	0	0	0	0	
Other Production Costs	589.56	447.05	0	0	52.78	
Total	250540.25	18965.79	22058.58	28.73	98942.07	
Engineering:						
Engineering Hours	202614.0	160137.2	5851.7	669.0	7339.4	
Engineering Labor	584473.17	476081.66	17233.48	1735.00	18503.86	
Eng. O/T Premium	13399.40	8735.96	558.44	0	441.28	
Eng. & Div. Adm. O'H	414385.73	326261.77	12165.69	1390.85	15182.67	
Eng. Material	5978.29	711.56	0	0	0	
Subcontract Costs	11100.00	0	0	0	0	
Other Eng. Costs	3025.07	3025.07	0	0	0	
Total	1032361.66	814816.02	29957.61	3125.85	34127.81	
Tool Engineering:						
Tool Eng. Hrs.	2422.3	2172.3	39.0	5.5		
Tool Eng. Labor	7821.47	7168.49	143.81	11.88		
Tool Eng. O/T Premium	0	0	0	0		
Tool Eng. & Div. Adm. O'H	3312.15	2980.40	53.51	7.55		
Tool Eng. Material	0	0	0	0		
Subcontract Costs	0	0	0	0		
Other Tool Eng. Costs	0	0	0	0		
Total	11133.62	10148.89	197.32	19.43		
Tool Manufacturing:						
Tool Mfg. Hours	4699.6	167.0	16.0		137.0	
Tool Mfg. Labor	8829.27	315.94	27.48		251.98	
Tool Mfg. O/T Premium	35.33	0	0		25.61	
Tool Mfg. & Div. Adm. O'H	9222.45	322.99	31.42		261.50	
Tool Mfg. Material	7497.36	65.57	882.15		637.53	
Subcontract Costs	0	0	0		0	
Other Tool Mfg. Costs	2950.17	557.22	0		2131.10	
Total	28534.58	1261.72	941.05		3307.72	
Sub-Total Hrs (Do Not Type)						
Sub-Total Amt (Do Not Type)						

Form CA 2-1

Tools & Equipt	Developments & Tests			
	Misc. Development Tests	Structural and Proof Tests	Power Plant Tests	Control System Tests
158	5190	5191	5192	5193
	99370	118332	14888	4975
	1851536	2208803	278830	93441
	21707	106465	16767	45
	1951163	2324040	292400	97709
	643042	62293	18172	21556
	1055784	0	1782	0
	5262	3711	0	0
	5528494	4705312	607951	212751
3295	204256	78026	160	430
89900	5023915	1959622	6096	12384
2968	2698889	92947	0	628
68503	4235545	1622161	3326	8940
	376304	144145	6190	34
	1110000	0	0	0
	0	0	0	0
161311	11015653	3818875	15612	21986
	2055			
	49729			
	0			
	27069			
	0			
	0			
	0			
	76798			
	27201	15830	20	745
	509014	299945	377	14051
	97	777	98	0
	534228	310901	393	14632
	246358	304341	7131	33381
	0	0	0	0
	23425	2760	0	0
	1313122	918724	7999	62064

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STATEMENT OF ACCUMULATED COSTS

CONTRACT AF33(600)5942 AIRPLANES 9 MODEL MX1554 SCHEDULE

DATE August 31, 1952

	Total Cost	Airplanes	Mock-up	Flight Test Program	Wind Tunnel Test Program	Spec. Shown
Flight:						
Flight Hours	9 5	9 5				
Flight Labor	32 65	32 65				
Flight O'time Premium	0	0				
Flight & Div. Adm. O.H.	78 28	78 28				
Flight Material	0	0				
Subcontract Costs	0	0				
Other Flight Cost	9 27	9 27				
Total	120 20	120 20				
Wind Tunnel Hours	14071 7	187 4			13884 3	
Wind Tunnel Labor	30011 36	390 89			29620 47	
Wind Tunnel O'T Premium	515 69	20 32			495 37	
Wind Tunnel & Div. Adm. O'H	14769 51				14769 51	
Wind Tunnel Material	429 58				429 58	
Subcontract Costs	33113 39				33113 39	
Other Wind Tunnel Costs	0				0	
Total	78839 53	411 21			78428 32	
Field Service						
Field Service Hours						
Field Service Labor						
Field Service O'T Premium						
Field Service Overhead						
Field Service Material						
Subcontract Costs						
Other Field Service Costs						
Total						
Other Division Transfers						
Other Contract Costs						
Model T-29 Common Tooling						
Lancing Tool Purchasing						
Integral Fuel Tank Tooling						
Labor & Overhead Accrual	61800 00					
P.P. Parts Sold to Rohr						
Total	61800 00					
	1463329 84					
GRAND TOTAL	1463329 84	845728 83	53154 56	3174 01	214805 92	
~~TOTAL HOURS (No Est Type)~~	27708685					

No bal. accrued in Oct 51 5/8

SA 2-8

	Developments + Tests			
Tools + Equipt.	Misc. Development Tests	Structural And Proof Tests	Power Plant Tests	Control System Tests
1613 11	1,79340 67	94429 11	6315 62	2968 01

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STATEMENT OF ACCUMULATED COSTS

CONTRACT AF 33(600) 5942 AIRPLANES 9 MODEL MX [illegible]54 SCHEDULE

DATE August 31, 1952

		Airplanes	Mock-up	Flight Test Program	Wind Tunnel Test Program	Spec Ground
General Office Overhead	12003 36					
Provision for Warranty						
Total(Inc.G.O. O'H Warr	$425333 20					
Project Budget						
General Office Overhead						
Provision for Warranty						
Total Budget						

Note: Contract Amendment for 33 additional airplanes execut

Form FA 2-8

	Developments & Tests			
Tools & Equip't	Misc. Development Tests	Structural and Proof Tests	Power Plant Tests	Control System Tests

ed September 11, 1952

Trial Balance Total		147297882	
Total G.O. Overhead	1200336		
Less G.O. Overhead Booked	964898	235438	Aug G.O. Overhead
		147533320	

General Office Overhead for August.

W.O.	682	Totals	Correct Balance
5100	310	1796713	1796403
5139	122	64276	64154
5140	570698	82177926	81607228
5210	7496	1038425	1030929
5200		741.69	74169
	578626		84572883
5150	38582	5354038	5315456
5153	2088	319489	317401
5155	1657.68	21646360	21480592
5158		161311	161311
5166		6180000	6180000
5190	122406	18056473	17934067
5191	50616	9493527	9442911
5192	6307	637869	631562
5193	505	297306	296801
	386272		61760101
	964898		146332984 ✓

Total hours	2773498
Less Wind Tunnel hours	2630
	2770868 ✓

Typed

Statement of Accumulated Costs

Contract AF 33(6[illegible])5942 - 9 Model MX1554 A[illegible]lanes and Data

July 31, 1952

Page 1 of 2

	Total	Airplanes	Mock-up	Flight Test Program	Wind Tunnel Test Program	Misc.
			5150	5133	5155	5
Production:						
Factory Prod. Hours	41755 3	89 7	4544 0	7 8	21717 7	
Factory Prod Labor	76674 49	141 66	7842 41	13 41	40025 97	1
Factory Prod O/T. Prem.	4451 96	0	92 63	0	3961 61	
Factory & Div. Adm O/Head	80622 28	175 46	8888 06	15 26	41433 19	1
Factory Prod Material	25589 92	14100 55	1461 32	0	3707 57	
Subcontract Costs	10569 72	0	0	0	0	1
Factory Prod. Other Cost	611 28	468 77	0	0	52 78	
Total	198519 65	14886 44	18284 42	28 67	89181 12	4
Engineering:						
Eng. Hours	167453 3	134577 4	4274 4	467 0	5863 3	1
Eng Labor	488023 10	403762 89	12652 79	1207 42	14842 67	4
Eng. O/T Prem.	8890 53	5797 66	318 43	0	300 39	
Eng. Div Adm. O/Head	339026 44	271349 09	8822 36	963 89	12028 70	3
Eng. Material	4385 67	659 06	0	0	0	
Subcontract Costs	11100 00	0	0	0	0	1
Eng. Other Cost.	3025 07	3025 07	0	0	0	
Total	854450 81	684593 77	21793 58	2171 31	27171 76	9
Tool Engineering						
Tool Eng. Hours	1908 8	1670 3	39 0	5 5		
Tool Eng. Labor	6376 73	5748 59	143 81	11 88		
Tool Eng. O/T Prem.	0	0	0	0		
Tool Eng. Div. Adm. O/Head	2605 79	2289 98	53 47	7 54		
Tool Eng. Material	0	0				
Subcontract costs	0	0				
Tool Eng. Other Costs	0	0				
Total	8982 52	8038 57	197 28	19 42		
Tool Manufacturing						
Tool Mfg. Hours	3792 3	121 0	16 0		78 5	
Tool Mfg. Labor	7105 00	217 93	27 48		141 64	
Tool Mfg. O/T Prem.	21 70	0	0		21 70	
Tool Mfg. Div. Adm. O/Head	7410 41	236 67	31 30		146 23	
Tool Mfg. Material	5327 54	61 90	882 15		631 77	

Developments & Tests

Development Tests	Structural & Air Proof Tests	Power Plant Tests	Control System Tests
90	5191	5192	5193
4492	54391	14348	730
74276	1008525	268680	13623
13277	10311	16184	0
52217	1063888	280647	14279
586733	27143	18172	0
55784	0	1188	0
5262	3711	0	0
887549	2113578	584871	27902
72602	49520	160	430
282868	1254385	6096	12384
204592	42185	0	628
551970	1022093	3302	8875
268165	98272	6190	34
116000	0	0	0
0	0	0	0
417595	2416935	15588	7921
1940			
47245			
0			
25480			
72725			
23286	12482		
435853	235942		
0	0		
455474	244147		
233749	128048	7131	6244

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Statement of Accumulated Costs

Contract AF 33(6),5942 - 9 Model MX15 / Airplanes and Data

July 31, 1952

Page 2 of 2

	Total	Airplanes	Mock-up	Flight Test Program	Wind Tunnel Test Program	Misc.
Subcontract Costs		-0-	-0-		-0-	
Tool Mfg. Other Costs	2470.22	364.62	-0-		1843.75	
Total	22334.87	881.12	940.93		2785.09	1
Flight						
Flight Hours	9 5	9 5				
Flight Labor	32.65	32.65				
Flight O/T Prem.	-0-	-0-				
Flight Div. Adm. O/head	81.07	81.07				
Flight Material	-0-	-0-				
Subcontract Costs	-0-	-0-				
Other Flight Costs	9.27	9.27				
Total	122.99	122.99				
Wind Tunnel						
Wind Tun. Hours	122856	1874			120982	
Wind Tun. Labor	26238.37	390.89			25847.48	
Wind Tun. O/T Prem.	353.53	20.32			333.21	
Wind Tun. Div. Adm. O/head	12109.14	-0-			12109.14	
Wind Tun Material	354.95	-0-			354.95	
Subcontract Costs	22168.04	-0-			22168.04	
Other Wind Tun Costs	-0-	-0-			-0-	
Total	61224.03	411.21			60812.82	
Other Division Transfers						
Other Contract Costs	-0-					
Labor & Overhead Accrual	410000.00					
Total	410000.00					
Grand Total	1186634.87	708934.10	41216.21	2219.40	179950.79	15
General Office Overhead	9685.54					
Total	1196320.41					
Project Budget						
General Office Overhead						
Total Budget						

Note: General Office Overhead to be added later

	Developments & Tests		
evelopment Tests	Structural and Proof Tests	Power Plant Tests	Control System Tests
234 25	27 60		
485 01	6108 97	71 31	62 44
5263 70	51414 10	6075 90	560 67

Trial Balance Total		1194176 85
Total G.O. Ch.	9685 54	
Less G.O. Booked	7541 98	2143 56
		1196320 41

July G.O.
Not Booked

Model 8 Trial Balance Reconcilliation
Contracts 33(600)-5942 & AF 33( )-23903
September 30, 1953

Contract AF 33(600)-5942

Trail Balance total		$ 26,824,059 67
Statement of Accumulated Costs		
Production phase total	$ 12,465,664 60	
Experimental	13,617,171 44	
Ideal Body	62,362 51	
Flight Test Program	723,883 18	
		$ 26,869,081 73
Total G.O. Overhead for Statement	$ 298,066 24	
Less G.O. Overhead Booked	253,044 18	
Less G.O. Overhead for Month of Sept.		45,022 06
Reconciled Total		$ 26,824,059 67

Contract AF 33(600)-23903

Trial Balance total		$ 165,685 54
Statement of Accumulated Costs		$ 165,900 2
G.O. Overhead for Statement	$ 1,062 89	
Less G.O. Overhead Booked	848 15	
Less G.O. Overhead for Month of Sept.		214 74
Reconciled Total		$ 165,685 54

Hours

Summary total		4,091,987 5
W.T. Hours		
5942	277 5	
23903	16 0	
		793 5
No Overhead		99 0
		4092873 0

Statement of Accumulated Costs

Contract AF (600)-5942 ~ (2) Proto[illegible] Model 8HN155 Airplanes & Data
September 30, 1953 Schedule A Page 1 of 2

	Total	Airplanes	Mockup & Proofing		Wind Tunnel Test Program
Factory Production					
Labor Hours	981,546.5	630,893.2	77,544.6		92,679.8
Labor Costs	1,828,094.98	1,173,477.92	141,167.65		175,234.60
O/T Premium	215,164.65	155,507.03	5,827.27		21,775.94
Overhead	2,310,523.69	1,515,314.41	171,787.01		208,004.95
Material	768,503.61	555,593.28	25,733.24		33,511.14
Subcontract	142,367.81	135,592.38			124.00
Other Costs	37,821.40	17,084.59	312.87		52.78
Total	5,302,484.14	3,552,569.61	344,828.04		438,703.41
Engineering:					
Labor Hours	1,071,752.9	856,514.2	21,933.8		30,148.5
Labor Costs	2,963,753.28	2,391,556.26	65,694.55		91,672.77
O/T Premium	167,604.39	130,399.05	3,521.90		4,532.79
Overhead	2,354,511.01	1,890,254.50	47,129.31		66,347.58
Material	212,514.99	16,529.87	866.04		11,556.59
Subcontract					
Other Costs	41,721.15	19,642.90	346.63		
Total	5,740,164.82	4,438,752.61	117,558.43		174,109.13
Tool Engineering:					
Labor Hours	1,311.2	898.2	118.5		
Labor Costs	3,491.01	2,495.12	316.08		
O/T Premium	79.19	70.32			
Overhead	1,899.50	1,316.95	170.23		
Material	321.94	214.69			107.25
Subcontract					
Other Costs					
Total	5,791.70	4,087.92	486.31		107.25
Tool Manufacturing:					
Labor Hours	247,014.6	222,155.2	117.4		1,069.2
Labor Costs	471,297.97	423,838.40	213.01		1,979.50
O/T Premium	50,649.80	47,030.20	27.51		164.65
Overhead	588,333.32	531,826.77	249.81		2,420.18
Material	229,934.71	198,047.60	9,360.19		3,799.45
Subcontract	10,503.41	10,503.41			
Other Costs	52,525.75	41,500.66	1,581.80		7,139.42
Total	1,403,244.94	1,252,747.[illegible]	11,432.32		15,523.50

Misc. velopment Tests	Structural + Proofing Tests	Power Plant Tests	Control System Tests	Cabin Pressure Tests	Armament + Pneumatic Tests	Other Contract Costs(1)
41,306.3	72,139.4	11,488.0	26,023.1	12,853.3	16,618.2	6
77,973.19	135,780.39	21,763.73	49,086.82	23,911.75	29,697.98	95
5,240.07	14,329.25	1,823.01	5,056.67	2,882.43	2,722.98	
92,070.04	163,763.24	26,944.35	61,818.23	30,886.50	39,933.52	1.44
70,820.00	16,036.25	15,550.72	40,883.33	9,591.05	774.60	
797.52	145.10	1,624.63	232.06	1,338.20	2,513.92	
20,114.94	94.01		36.02	134.19		
267,025.76	330,148.24	67,706.44	157,113.13	68,744.12	75,643.00	2.39
64,751.7	45,771.8	13,717.3	12,011.1	15,133.4	339.0	11,432.1
169,943.73	112,080.47	38,480.76	29,639.89	36,527.35	890.61	27,266.89
10,230.94	7,127.44	2,915.65	2,528.74	4,854.34	64.06	1,429.88
141,703.07	100,809.84	30,792.46	26,993.07	34,019.88	762.08	25,699.30
82,266.74	24,003.43	41,087.83	17,165.98	18,259.47	102.85	676.17
21,751.62						40.00
425,896.10	244,021.18	113,276.70	76,327.68	93,661.04	1,819.60	55,112.30
205.5	21.0	16.0			52.0	
497.29	45.17	31.68			114.87	
					8.86	
275.82	29.64	25.15			81.74	
77.31	74.81	56.83	-0-	-0-	205.47	-0-
5,706.8	4,144.4	3,152.1	7,748.2	126.3	2,794.0	
10,797.46	7,904.52	6,107.57	14,862.01	237.25	5,332.95	
416.32	556.11	428.12	1,341.95	31.71	653.17	
11,967.12	9,205.82	7,483.89	18,162.24	303.51	6,713.98	
6,194.89	7,531.17	2,282.66	1,960.63	131.15	706.97	
722.31	73.08	1,324.74	8.50		175.22	
32,098.10	25,270.70	17,546.98	36,335.33	703.62	13,587.29	-0-

Statement of Accumulated Costs

Contract AF 33(600)-5942-(2) Prototype Model 8

September 30, 1953

Page 2 of 2

	Total	Airplanes	Mock up & Proofing		Wind Tunnel Test Program	D
Flight						
Labor Hours	9 5	9 5				
Labor Costs	32 65	32 65				
O/T Premium						
Overhead	78 01	78 01				
Material	1,296 19	1,296 19				
Subcontract						
Other Costs	9 27	9 27				
Total	1,416 12	1,416 12	-0-		-0-	
Wind Tunnel:						
Labor Hours	39,755 6				39,755 6	
Labor Costs	92,418 72				92,418 72	
O/T Premium	3,960 07				3,960 07	
Overhead	50,049 17				50,049 17	
Material	3,478 72				3,478 72	
Subcontract	51,803 92				51,803 92	
Other Costs						
Total	201,710 60	-0-	-0-		201,710 60	
Transfers from Other Div	36 23	36 23	-0-		-0-	
Other Contract Costs:						
Labor & O'hd. Accrual	142,500 00	142,500 00				
GOM Inventory	564,818 66	564,818 66				
Instrumentation	81,938 77	81,938 77				
Unreimbursable Cost	66 94	66 94				
Total	789,324 37	789,324 37				
Total Division Costs	13,444,172 92	10,038,564 01	474,305 10		830,153 89	
General Office O'hd	172,998 52					
Total Costs Inc. G.O. O'hd	13,617,171 44					
Total Hours	2,341,290 3	1,710,470 3	99,714 3		163,653 6	

(1) Other Contract
(a) Handbooks
(b) Preparation

Misc. -velopment Tests	Structural & Proofing Tests	Power Plant Tests	Control System Tests	Cabin Pressure Tests	Armament & Pneumatic Tests	Other Contract Cost (1)
-0-	-0-	-0-	-0-	-0-	-0-	-0-
-0-	-0-	-0-	-0-	-0-	-0-	-0-
-0-	-0-	-0-	-0-	-0-	-0-	-0-
72379307	59951493	198,58695	269,77614	16310878	91,25536	5511469
1119703	1220766	28,3734	457829	28,1130	19,8032	11,4327

-cts include

& Manuals. 50,889.30

of M.T.V.C. data & coordination work 427539

(1)

Statement of Accumulated Costs

Contract AF 33(600)-5942 (1) Static Test + (40) Production Model 8 MX 1554 Airplanes & Data
September 30, 1953

Schedule C Page 1 of 2

	Total	Airplanes	Spare Parts	Mock up & Proofing	Special Tools & Ground Equipment	Mis Develo Te
Factory Production						
Labor Hours	394,374.6	238,766.2	4,195.7	38,156.3	7,715.9	
Labor Costs	711,129.74	424,172.24	7,767.29	71,268.60	14,275.70	
O/T Premium	54,198.66	28,232.61	344.65	6,571.62	1,141.62	
Overhead	947,678.39	573,751.40	10,082.26	91,689.58	18,541.31	
Material	578,267.80	488,093.95	29,135.17	22,528.25	5,205.03	2,
Subcontract	268,132.95	243,283.15			240.78	
Other Costs	24,400.16	24,400.16				
Total	2,583,807.70	1,781,933.51	47,329.37	192,058.05	39,404.44	2,
Engineering						
Labor Hours	34,552.1	21,583.4	300.3		11,474.7	
Labor Costs	94,047.45	58,820.21	590.32		31,707.62	
O/T Premium	5,788.29	4,037.81	34.20		1,574.06	
Overhead	77,525.20	48,519.47	675.07		25,647.23	
Material	3,385.59	103.29		17.04	3,203.50	
Subcontract						
Other Costs	2,238.03					2,
Total	182,984.56	111,474.78	1,299.59	17.04	62,132.41	2,
Tool Engineering						
Labor Hours	259,595.1	254,257.2	3,084.9	40.0		
Labor Costs	604,089.77	592,300.84	6,714.27	87.10		
O/T Premium	52,057.00	51,422.01	275.48	9.01		
Overhead	406,669.12	398,277.94	4,849.46	62.88		
Material	98.66	98.66				
Subcontract	222,718.56	222,718.56				
Other Costs						
Total	1,285,633.11	1,264,818.01	11,839.21	158.99	-0-	—
Tool Manufacturing						
Labor Hours	910,753.3	899,245.7	3,582.2	217.0	91.0	
Labor Costs	1,754,961.65	1,732,812.[illegible]	6,834.69	414.32	177.96	
O/T Premium	123,049.06	121,186.69	614.32	7.90	17.47	
Overhead	2,186,600.97	2,158,942.40	8,608.02	521.44	218.68	
Material	808,994.23	799,74[illegible]	1,185.83	59.28	4,633.03	
Subcontract	214,876.27	214,534.77	341.50			
Other Costs	142,505.33	137,601.35		459.27		1
Total	5,230,987.51	5,164,822.60	17,574.36	1,462.21	5,042.14	

…e …pment …sts	Static Test Program	Power Plant Test Program	Missile Firing Test Program	Other Contract Cost (1)
82.6	27,612.9	57,436.0	20,398.0	11.0
48.44	50,629.58	106,389.01	36,461.36	17.52
12.03	2,609.65	11,656.03	3,630.45	
98.48	66,353.81	138,018.71	49,016.40	26.44
03.34	16,490.67	9,066.26	5,207.56	37.57
	13,220.89		11,388.13	
62.29	149,304.60	265,130.01	105,703.90	81.53
	1,193.7			
	2,929.30			
	148.22			
	2,683.43			
46.64	15.12			
38.03				
84.67	5,776.07	-0-	-0-	-0-
	842.4	918.9	451.7	
	1,982.85	2,000.63	1,004.08	
	17.72	230.73	102.05	
	1,324.26	1,444.51	710.07	
-0-	3,324.83	3,675.87	1,816.20	-0-
14.0	6,766.7	665.1	632.6	41.0
26.78	12,158.30	1,271.88	1,203.57	76.76
1.97	1,058.99	55.61	105.18	.93
33.64	15,058.89	1,598.24	1,520.14	98.52
2.45	2,682.53	587.28	43.74	56.09
69.39	808.52	1,636.66	1,671.81	158.32
34.23	31,767.23	5,149.67	4,544.44	39[illegible]

Statement of Accumulated Costs
Production Phase

September 30, 1953

Schedule C – Page 2 of 2

	Total	Airplanes	Spare Parts	Mockup + Proofing	Special Tools + Ground Equipment	Mi Devel Te
Flight						
Labor Hours						
Labor Costs						
O/T Premium						
Overhead						
Material						
Subcontract						
Other Costs						
Total	-0-	-0-	-0-	-0-	-0-	-
Transfers from Other Div.	1,729,891.41	1,729,891.41	-0-	-0-	-0-	-
Other Contract Costs:						
Labor + O'h'd Accrual	169,300.00	169,300.00				
G.O.M. Inventory	1,158,677.45	1,158,677.45				
Instrumentation		-0-				
Total	1,327,977.45	1,327,977.45				
Total Division Costs	12,341,281.74	11,380,917.76	78,042.53	193,696.29	106,578.99	5,3
General Office O'h'd.	124,382.86					
Total costs Inc. G.O. O'h'd	12,465,664.60					

(1) Other Contract co

(a) Manufacture o

(b) Manufacture o

1,599,275.1	1,413,850.5	11,163.1	38,413.3	19,281.6

:c, pment. ts	Static Test Program	Power Plant Test Stand	Missile Firing Test Program	Other Contract Costs(1)
0-	-0-	-0-	-0-	-0-
-	-0-	-0-	-0-	-0-
F1 19	190,172 73	273,955 55	112,064 54	472 16
ets include:				
f Special Tools of			# 471.72	
f Special Parts of			# 40	
96 6	35,915 7	59,020 0	21,482 3	52.0

Statement of Accumulated Costs
Contract AF 33(600)-23903 Eng + Production Tooling Design Costs Model & Trainer
September 30, 1953 Schedule E Page 1 of 2

	Total	Airplanes	Mockup	Wind Tunnel Test Program
Factory Production				
Labor Hours	2,722.9	4.2	401.5	2,317.2
Labor Costs	5,102.54	7.37	743.25	4,351.92
O/T Premium	517.58		12.20	505.38
Overhead	6,543.13	10.09	964.81	5,568.23
Material	14.20	5.17	4.87	4.16
Subcontract				
Other Costs				
Total	12,177.45	22.63	1,725.13	10,429.69
Engineering:				
Labor Hours	9,520.6	9,417.6	27.0	76.0
Labor Costs	30,143.41	29,733.37	100.44	309.60
O/T Premium	1,314.23	1,287.86	3.77	22.60
Overhead	21,402.31	21,170.27	60.69	170.85
Material	49.75			49.75
Subcontract				
Other Costs	336.68	336.68		
Total	53,246.38	52,528.68	164.90	552.80
Tool Engineering:				
Labor Hours	298.0	298.0		
Labor Costs	991.06	991.06		
O/T Premium	30.12	30.12		
Overhead	468.45	468.45		
Material				
Subcontract				
Other Costs				
Total	1,489.63	1,489.63	- 0 -	- 0 -
Tool Manufacturing				
Labor Hours				
Labor Costs				
O/T Premium				
Overhead				
Material	263.49	17.78		250.71
Subcontract				
Other Costs	737.56	576.65	61.74	99.17
Total.	1,001.05	589.43	61.74	349.88

Statement of Accumulated Costs

Contract AF 33(600)-23903 Trainer Phase
September 30, 1953
Schedule E Page 2 of 2

	Total	Airplanes	Mockup	Wind Tunnel Test Program
Flight				
Labor Hours				
Labor Costs				
O/T Premium				
Overhead				
Material				
Subcontract				
Other Costs				
Total	-0-	-0-	-0-	-0-
Wind Tunnel				
Labor Hours	1,125.4			1,125.4
Labor Costs	2,668.50			2,668.50
O/T Premium	204.45			204.45
Overhead	1,249.01			1,249.01
Material				
Subcontract				
Other Costs				
Total	4,121.96	-0-	-0-	4,121.96
Transfers from Other Div	91,500.92	91,500.92	-0-	-0-
Other Contract Costs				
Labor + O'h'd Accrual	1,300.00	1,300.00		
Total	1,300.00	1,300.00		
Total Division Costs	164,837.39	147,431.29	1,951.77	15,454.33
General Office O'h'd.	1,062.89			
Total costs Inc. G.O.O'h'd	165,900.28			
	13,666.9	9,719.8	428.5	3,518.6

Analyses of Accumulated Tooling & Engineering Costs

Contract AF 33(60)5942 (2) Prototype M l B-MX1554 Airplane & Data

September 30, 1953

Schedule B

	Total Airplanes	Original Design	Correction of Eng. Errors	Correction of Tooling Errors	Product Improvements
Engineering					
Labor Hours	856,514.2	469,090.1	17,149.8	3,713.4	474.5
Labor Costs	2,391,556.26	1,290,496.47	38,022.05	8,642.10	1,032.27
O/T Premium	130,399.05	73,858.19	3,254.91	494.18	91.38
Overhead	1,880,254.56	1,024,534.25	38,544.55	8,347.72	1,066.68
Material	16,529.89	1,401.25		1.32	4.21
Subcontract					
Other Costs	19,642.90	18,773.24			
Total	4,438,382.66	2,409,063.40	79,821.51	17,485.32	2,194.52
Tool Engineering:					
Labor Hours	898.2	898.2			
Labor Costs	2,485.92	2,485.92			
O/T Premium	70.33	70.33			
Overhead	1,316.98	1,316.98			
Material	214.69	214.69			
Subcontract					
Other Costs					
Total	4,087.92	4,087.92	-0-	-0-	-0-
Tool Manufacturing:					
Labor Hours	222,155.2	221,870.3	46.6		93.0
Labor Costs	423,838.40	423,285.64	184.91		182.03
O/T Premium	47,030.21	46,986.27	4.64		
Overhead	531,826.77	531,136.27	112.00		230.63
Material	198,047.60	197,502.36	378.30		2.30
Subcontract	10,503.41	10,223.41			
Other Costs	41,500.66	41,386.16		92.25	
Total	1,252,747.10	1,250,520.11	579.85	92.25	415.16
Transfers from Other Div.	36.23	36.23	-0-	-0-	-0-
Grand Total	5,695,253.91	3,663,707.66	80,401.36	17,577.57	2,609.68
Total Hours	1,079,567.6	691,858.6	17,196.4	3,713.4	567.5

stomer Requested Changes	Tooling Improvement	Liaison Tool Maint. + Repair	Eng. Work Not Resulting in Eng. Release	Changes Due To Failure of Vendor Items	Other
454025		439397	2760116	6676	650
137,97610		120,78620	792,588.41	1,83918	17353
7,93603		11,46581	33,20079	8856	920
107,06482		98,77644	605,28056	1,49342	14612
14385			1,09516		13,88407
			85130		1836
248,12080	-0-	231,02845	1,433,01622	3,42116	14,23128
-0-	-0-	-0-	-0-	-0-	-0-
1015		258	180		
20437		5034	3091		
3650		285			
24391		6070	4326		
28		716	12094		58
					28000
1070	368				787
49576	368	10673	24511	-0-	28845
-0-	-0-	-0-	-0-	-0-	-0-
248,61656	368	231,13518	1,433,261.32	3,42116	1451973
455040	-0-	439655	2760296	6676	650

Statement of Accumulated Costs 30
Contract AF33(600)-3942 ~ [illegible] Body Airplane 47
September 30, 1953

	Total	5440	5447	5450	5466
Factory Production:					
Labor Hours	4021.6			4021.6	
Labor Costs	7,561.46			7,561.46	
O/T Premium	325.89			325.89	
Overhead	9,663.90			9,663.90	
Material	567.53			567.53	
Subcontract					
Other Costs					
Total	18,118.78	-0-	-0-	18,118.78	-0-
Engineering:					
Labor Hours	4,672.6	2,435.6	1,889.2	347.8	
Labor Costs	15,187.62	8,768.23	5,370.37	1,049.02	
O/T Premium	1,154.54	588.57	508.23	57.74	
Overhead	10,504.01	5,475.23	4,246.92	781.86	
Material					
Subcontract					
Other Costs					
Total	26,846.17	14,832.03	10,125.52	1,888.62	-0-
Tool Engineering					
Labor Hours					
Labor Costs					
O/T Premium					
Overhead					
Material					
Subcontract					
Other Costs					
Total	-0-	-0-	-0-	-0-	-0-
Tool Manufacturing					
Labor Hours					
Labor Costs					
O/T Premium					
Overhead					
Material	19.41			19.41	
Subcontract					
Other costs					
Total	19.41	-0-	-0-	19.41	-0-
Labor & O'hd Accrual	16,700.00	-0-	-0-	-0-	16,700.00
Total	61,684.36	14,832.03	10,125.52	20,026.81	16,700.00

Control Sheet
Weal Body Changes
September 30, 1953

W.O. Number	G. O. Ov'hd.	Total	Total Less G.O. Ov'hd.		Hours
5440		14,832 03	14,832 03		3,435 6
5447		10,125 52	10,125 52		1,889 2
5450		20,026 81	20026 81		4,369 4
5466		16,700 00	16,700 00		— —
		61,684 36	61,684 36		8,694 2
			2		2

Statement of Accumulated Costs
Contract AF33(600)-5942 – Flight Test Program
September 30, 1953

Page 1 of 2

	Total	5153	5253	5503	5510
Factory Production:					
Labor Hours	1,924.4	1,413.3	425.1	86.0	
Labor Costs	3,568.13	2,627.39	789.90	150.84	
O/T Premium	251.61	199.00	52.61		
Overhead	4,619.32	3,391.15	1,021.52	200.65	
Material	8,725.76	8,620.31	105.45		
Subcontract					
Other costs	430.49	274.98		155.51	
Total	17,595.31	15,112.83	1,969.48	513.00	-0-
Engineering:					
Labor Hours	126,911.7	105,738.0	21,173.7		
Labor Costs	325,636.02	266,655.25	58,980.77		
O/T Premium	34,342.15	29,513.03	4,829.12		
Overhead	284,986.39	237,387.91	47,598.48		
Material	55,079.32	53,835.64	1,243.68		
Subcontract					
Other costs					
Total	700,043.88	587,391.83	112,652.05	-0-	-0-
Tool Engineering:					
Labor Hours	5.5	5.5			
Labor Costs	11.88	11.88			
O/T Premium					
Overhead	7.76	7.76			
Material					
Subcontract					
Other costs					
Total	19.64	19.64	-0-	-0-	-0-
Tool Manufacturing:					
Labor Hours	43.0	43.0			
Labor Costs	80.39	80.39			
O/T Premium					
Overhead	103.33	103.33			
Material					
Subcontract					
Other costs					
Total	183.72	183.72	-0-	-0-	-0-

Statement of Accumulated Costs
Flight Test Program
September 30, 1953 Page 2 of 2

	Total	5153	5253	5503	5510
Flight:					
Labor Hours					
Labor Costs					
O/T Premium					
Overhead					
Material	5,063.90	5,063.90			
Subcontract					
Other costs					
Total	5,063.90	5,063.90	-0-	-0-	-0-
Wind Tunnel					
Labor Hours	76.4	76.4			
Labor Costs	251.81	251.81			
O/T Premium	30.70	30.70			
Overhead	546.44	546.44			
Material					
Subcontract					
Other costs					
Total	828.95	828.95	-0-	-0-	-0-
Other Contract Costs					
No Overhead Costs	141.07				141.07
Total	141.07	-0-	-0-	-0-	141.07
Total Division Costs	723,876.47	608,600.87	114,621.53	513.00	141.07
G.O. Overhead	6.71				
Total Costs Inc. G.O. Ovhd.	723,883.18				
Total Hours	128,961.0	107,276.2	21,598.8	86.0	-0-

Control Sheet

Contra AF 33(600)-5992 Flight t Program

September 30, 1953

W.O. Number	G.O. O'hd.	Total	Total Less G.O. Ov'hd.		Hours
5503		513 00	513 00		86 0
5510		191 07	141 07	No overhead	92 0
5548		34 52	34 52		8 0
		688 59	688 59		186 0
			2		2

Airplane Schedule
Contract AF( )(600)-5942 Prototype Phase
September 30, 1953

Page 1 of 2

	Total	5100 * 5052	5101	5111	5112 *5166
Factory Production					
Labor Hours	630,893.2		268,647.6	274,111.7	3.8
Labor Costs	1,173,477.92	.26	502,659.11	507,703.69	7.26
O/T Premium	155,507.03		62,793.50	68,199.65	
Overhead	1,515,314.41		644,988.52	659,409.68	9.13
Material	555,593.28	50,961.76	191,265.62	71,538.40	.17
Subcontract	135,592.38	6.00	49,296.60	64,092.02	
Other Costs	17,084.59	31.64	242.72	4.17	
Total	3,552,569.61	50,936.38	1,451,246.07	1,370,947.61	16.56
Engineering:					
Labor Hours	856,514.2				
Labor Costs	2,391,556.26				
O/T Premium	130,399.05				
Overhead	1,880,254.56				
Material	16,529.89				
Subcontract					
Other Costs	19,642.90				
Total	4,438,382.66	-0-	-0-	-0-	-0-
Tool Engineering:					
Labor Hours	898.2				
Labor Costs	2,485.92				
O/T Premium	70.33				
Overhead	1,316.98				
Material	214.69				
Subcontract					
Other Costs					
Total	4,087.92	-0-	-0-	-0-	-0-
Tool Manufacturing					
Labor Hours	222,155.2				
Labor Costs	423,838.40				
O/T Premium	47,030.26				
Overhead	531,826.77				
Material	178,047.60				
Subcontract	10,503.41				
Other Costs	41,500.66				
Total	1,252,747.10	-0-	-0-	-0-	-0-

5121	5122	5131 *5161	5132	5139	5140 *5169	5168 *5147	Tooling + Eng. Costs
82,1516	120	145		5,6520			
150,84330	2369	2638		10,21436	13		
24,24853	803			25732			
197,41029	2885	3493		13,43311			
129,11007	130	* 60545	7,65328	105,66872		41	
		* 16,37887		2,87889	2,94000		
3600				16,81054	* 11880	9600	
503,64719	6187	15,83463	765328	149,26294	3,05867	9559	-0-
							856,5142
							2,391,55626
							130,39905
							1,88025456
							16,52989
							19,64290
-0-	-0-	-/-	-0-	-0-	-0-	-0-	4438,38266
							8982
							2,48592
							7033
							1,31698
							21469
-0-	-0-	-0-	-0-	-0-	-0-	-0-	4,08792
							222,1557
							423,83840
							47,03026
							531,82677
							198,04760
							10,50341
							41,50066
-0-	-0-	-0-	-0-	-0-	-0-	-/-	1,252,74710

5121	5122	5131 * 5161	5132	5139	5140 * 5169	5168 *5147	Tooling + Eng. Costs
				95			
				32 65			
				78 01			
				1,296 19			
				9 27			
-0-	-0-	-0-	-0-	1,416 12	-0-	-0-	-0-
-0-	-0-	-0-	-0-	-0-	-0-	-0-	36 23
						* 66 94	
-0-	-0-	-0-	-0-	-0-	-0-	66 94	
503647 19	61 87	15834 63	7,653 28	150,677 06	3058 67	28 65	5695253 91
87,151 6	120	14 5	-0-	566 15	-0-	-0-	1079567 6

Airplane Schedule

Prototype Phase

September 30, 1953

Page 2 of 2

	Total	5100 *5052	5101	5111	5112 *5166
Flight:					
Labor Hours	95				
Labor Costs	37.65				
O/T Premium					
Overhead	78.01				
Material	1,296.19				
Subcontract					
Other costs	9.27				
Total	1,416.12	-0-	-0-	-0-	-0-
Transfers from Other Div	36.23	-0-	-0-	-0-	-0-
Other Contract Costs					
Labor & O'head Accrual	142,500.00				*142,500.00
G.O.M Inventory	564,818.66	564,818.66			
Instrumentation	81,938.77	* 81,938.77			
Unreimbursable Cost	66.94				
Total	789,324.37	646,757.43	-0-	-0-	142,500.00
Grand Total	10,038,564.01	697,693.81	1,451,246.07	1,370,947.61	142,516.56
Total Hours	1,710,470.3	-0-	268,647.6	274,111.7	3.8

Analysis of Tooling + Eng. Other Costs
Contract AF 33(600)-5942 Prototype Phase
September 30, 1953

	Total	5100	5101	5111	5121	51
Engineering:						
Labor Hours	65.0		39.0	26.0		
Labor Costs	173.53		125.69	47.84		
O/T Premium	9.20			9.20		
Overhead	146.12		87.67	58.45		
Material	13,884.07	12,238.49	22.00		6.38	1,
Subcontract						
Other Costs	18.36					
Total	14,231.28	12,238.49	235.36	115.49	6.38	1,
Tool Engineering:						
Labor Hours						
Labor Costs						
O/T Premium						
Overhead						
Material						
Subcontract						
Other Costs						
Total	-0-	-0-	-0-	-0-	-0-	-
Tool Manufacturing						
Labor Hours						
Labor Costs						
O/T Premium						
Overhead						
Material	.58		.30		.28	
Subcontract	280.00		280.00			
Other Costs	7.87				7.87	
Total	288.45	-0-	280.30	-0-	8.15	-
Grand Total	14,519.73	12,238.49	515.66	115.49	14.53	1,
Total Hours	65.0	-0-	39.0	26.0	-0-	-

79	5161
9486	2234
1836	
1322	2234
0	0
0	0
1322	2234
0	0

Other Contract Costs
Contract AF 33(600)-5942 Prototype Phase
September 30, 1953

	Total	5151	5195
Factory Production			
Labor Hours	.6	.6	
Labor Costs	.95	.95	
O/T Premium			
Overhead	1.44	1.44	
Material			
Subcontract			
Other Costs			
Total	2.39	2.39	- • -
Engineering:			
Labor Hours	11,432.1	10,731.3	700.8
Labor Costs	27,266.89	24,710.88	2,556.01
O/T Premium	1,429.88	1,339.47	90.41
Overhead	25,699.36	24,123.96	1,575.40
Material	676.17	672.60	3.57
Subcontract			
Other Costs	40.00	40.00	
Total	55,112.30	50,886.91	4,225.39
Grand Total	55,114.69	50,889.30	4,225.39
Hours	11,432.7	10,731.9	700.8

Control Sheet

Contra 33(600)-5942 Protot Phase

September 30, 1953

W.O. Number	G.O. Ov'hd. (682)	Total	Total Less G.O. Ov'hd	Transfers To 5200	Hours	
5100	4.93	63,179.80	63,174.87		-0-	
5101	19,530.95	1,471,292.68	1,451,761.73		268,686.6	
5109		20.42	20.42	20.42	4.9	
5111	17,434.15	1,388,497.25	1,371,063.10		274,407.7	
5121	3,949.59	507,617.31	503,661.72		82,151.6	
5122		61.87	61.87		12.0	
5131	1.07	62.28	61.21		14.5	
5132		7,653.25	7,653.25		-0-	
5133	.08	.08			-0-	
5139	385.52	152,682.97	152,297.45		5,661.5	
5168		95.59	95.59		-0-	
5169		118.80	118.80			
5140	45,690.11	3,712,337.64	3,666,647.53		691,858.6	
5141	1,020.85	81,422.21	80,401.36		17,196.4	
5142	35.23	17,612.80	17,577.57		3,713.4	
5143	43.43	2,653.11	2,609.68		567.5	
5144	2,708.72	251,325.28	248,616.56		45,504.0	
5145		3.68	3.68			
5146	2,598.33	233,733.51	231,135.18		43,965.5	
5147	16,499.20	1,449,827.47	1,433,328.27		276,029.6	
5148		37.40	37.40	37.40		
5149	44.99	3,466.15	3,421.16		667.6	
5157		26.31	26.31		5.0	
5150	6,132.60	480,411.39	474,278.79		99,709.3	
5151	547.02	51,436.32	50,889.30		10,731.9	
5153	5,892.72	614,493.59	608,600.87		107,276.2	Plus 7.0 W.T.
5155	8,835.16	838,983.88	830,148.72		163,653.6	770.5 W.T.
5159	.04	.04				
5190	6,436.38	730,229.45	723,793.07		111,970.3	
5161		15,795.70	15,795.76			
5166		142,500.00	142,500.00			
5158		39.64	39.64			
5191	7,517.73	607,032.66	599,514.93		122,076.6	
5192	1,946.34	200,533.29	198,586.95		28,373.4	
5193	3,054.29	272,830.43	269,776.14		45,782.9	
5194	1,689.30	164,798.08	163,108.78		28,113.0	
5195	33.92	4,259.31	4,225.39		700.8	
5196	1,048.22	92,303.58	91,255.36		19,803.2	
5112		16.56	16.56		3.8	
	153,080.87	13,559,194.69	13,406,113.82		2,448,671.4	
		Z		Plus W.T.	777.5	
				Z	2,449,448.9	

Analysis of Accumulated Tooling & Engineering Costs

Contract AF 33(600)-5942 - (1) Static Test + (40) Production Model B-MX1554 Airplanes & data
September 30, 1953

Schedule D

	Total Airplanes	Original Design	Correction of Eng. Errors	Correction of Tooling Errors	Product Improvements	Costs Reque Cha
Engineering:						
Labor Hours	21,583.4	460.0				
Labor Costs	58,820.21	1,238.91				
O/T Premium	4,031.81	69.63				
Overhead	48,519.47	1,034.08				
Material	103.29					
Subcontract						
Other Costs						
Total	111,474.78	2,342.62	-0-	-0-	-0-	-
Tool Engineering:						
Labor Hours	254,257.2	200,407.2	25,846.5	3,614.8	276.5	
Labor Costs	592,300.84	472,246.66	58,124.59	8,037.99	630.94	
O/T Premium	51,422.01	40,480.34	5,699.92	624.63	49.18	
Overhead	398,277.94	313,628.15	40,630.61	5,682.47	434.66	
Material	98.66	98.66				
Subcontract	222,718.56	222,718.56				
Other Costs						
Total	1,264,818.01	1,049,172.37	104,455.12	14,345.09	1,114.78	1,
Tool Manufacturing						
Labor Hours	899,243.7	799,430.3	57,696.3	16,035.9	1,712.3	4,
Labor Costs	1,732,812.39	1,541,276.73	111,171.52	30,615.94	3,315.46	7,
O/T Premium	121,186.69	108,382.63	7,708.47	2,089.35	180.95	
Overhead	2,158,943.40	1,919,204.47	138,604.82	38,515.28	4,112.83	10,
Material	799,744.00	750,225.30	19,596.43	11,539.74	104.91	
Subcontract	214,534.77	209,582.12		35.85		
Other Costs	137,601.35	129,784.22	5,939.68	1,676.60		
Total	5,164,822.60	4,658,455.47	283,020.92	84,472.76	7,714.15	18,
Transfers from Other Div.	1,584,672.85	1,584,67[illegible]	-0-	-0-	-0-	-
Total Tooling + Eng. Costs	8,125,788.24	7,294,643.21	387,476.04	98,817.85	8,828.93	819
Total Hours	1,175,084.3	1,000,297.5	[illegible]	19,650.7	1988.8	4,

mer sted ges	Tooling Improvements	Liaison Tool Main & Repair	Production Facilities	Changes Due To Failure of Vendor Items	Other
		21,123 4			
		57,581 30			
		3,962 18			
		47,485 39			
					103 29
0-	-0-	109,028 87	-0-	-0-	163 29
60 8	42 0	23,799 9		9 5	
78 29	97 79	52,563 55		21 03	
65 82	9 88	4,492 24			
108 93	66 03	37,412 16		14 93	
53 04	173 70	94,467 95	-0-	35 96	-0-
188 4	93 9	9,350 8	10,732 8	13 0	
59 60	175 40	17,100 65	21,272 83	24 26	
443 09	4 90	1,596 63	778 72	1 96	
64 73	225 64	22,469 98	25,714 41	31 24	
81 90	10 15	1,430 35	16,436 85	18 37	
					4916 79
8 77		184 05		8 03	
58 09	416 09	42,781 66	64,202 81	83 66	4916 79
0-	-0-	-0-	-0-	-0-	-0-
811 13	589 79	246,278 48	64,202 81	119 82	5,029 08
449 2	135 9	54,274 1	10,732 8	22 5	

Airplane Schedule
Contract AF 33(600)-5942 Production Phase
September 30, 1953

Page 1 of 2

	Total	5200	5201	5202	5203
Factory Production:					
1 Labor Hours	238766.2	24992.8	93841.9	32068.5	1376.2
1 Labor Costs	424,172.24	42207.72	163690.06	55356.28	2387.99
2 O/T Premium	28,232.61	2820.32	9496.26	3411.10	183.74
4 Overhead	573,751.40	60055.90	225502.08	77061.62	3307.00
5 Material	488,093.95	894.91	284288.06	90118.13	3206.04
6 Subcontract	243,283.15	—	67617.72	5431.05	144.29
7 & 8 Other Costs	24,400.16	61.98	539.67	143.67	-
Total	1,781,933.51	106040.83	751133.85	231521.85	9229.06
Engineering					
Labor Hours	21,583.4				
Labor Costs	58,820.21				
O/T Premium	4,031.81				
Overhead	48,519.47				
Material	103.29				
Subcontract					
Other Costs					
Total	111,474.78	-0-	-0-	-0-	-0-
Tool Engineering					
Labor Hours	254257.2				
Labor Costs	592,300.54				
O/T Premium	51,422.01				
Overhead	398,277.94				
Material	98.66				
Subcontract	222,718.56				
Other Costs					
Total	1,264,818.01	-0-	-0-	-0-	-0-
Tool Manufacturing					
Labor Hours	899,243.7				
Labor Costs	1,732,812.39				
O/T Premium	121,186.69				
Overhead	2,158,943.40				
Material	799,744.00				
Subcontract	214,534.77				
Other Costs	137,601.35				
Total	5,164,822.60	-0-	-0-	-0-	-0-

5204	5205	5210	5211	5212	5213	5214	5221	523
203		530	727018	28180	96		350	3
3410		9280	13054195	514799	1777		6633	65
303		762	1169641	11795			1060	2
4879		12736	17470243	677165	2307		8411	8
4169	4573	22644	5814963	481858	2114	46	74771	
14429	14705	—	6442350	400325	333325			
							1650	
27190	19278	45422	43951392	2085942	339523	46	92525	15

-0- -0- -0- -0- -0- -0- -0- -0-

-0- -0- -0- -0- -0- -0- -0- -0-

-0- -0- -0- -0- -0- -0- -0- -0-

5231	5232	5233	5234	5235	5239	5240	5266	52 #52
36 14	–	124 58	72 00		3,79 39	4,77 80		
650 36		2210 10	1275 73		6,595 26	13,897 80		
25 61		193 57	47 86		47 84	170 70		
868 44		-2993 67	1730 15		9,113 75	11,361 38		
3 75	9021 43	- 152 86	184 86	160 71	35,064 17	633 43		3
					8,594 07			
					22,529 34			K 11
1540 66	9021 43	5550 20	3238 60	160 71	81,904 43	26,063 31	–	1,4
-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	–
-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	–
-0-	-0-	-0-	-0-	-0-	-0-	–	-0-	–

9	5240	5266	5268 & 5269	5261	Eng. & Tooling costs
939 9	477.80				
595.26	13,897.80				
47.84	170.70				
13.75	11,361.38	–			
417	633.43	–	321.72		
84.07				89,484.68	
29.34			+ 1,109.00		
04.43	26,063.31	–0–	1,430.72	89,484.68	–0–
					21,583.4
					58,820.21
					4,031.81
					48,519.47
					103.29
–0–	–0–	–0–	–0–	–0–	111,474.78
					254,257.2
					592,300.84
					51,422.01
					398,277.94
					98.66
					222,718.56
–0–	–0–	–0–	–0–	–0–	1,264,818.01
					899,243.7
					1,732,812.39
					121,186.69
					2,158,943.40
					799,744.00
					214,534.77
					137,601.35
–0–	–0–	–0–	–0–	–0–	5,164,822.60

Airplane Schedule
Production Phase

September 30, 1953

Page 2 of 2

	Total	5200	5201	5202	5203	52
681 Transfers from Other Div.	1,729,891 41	139902 99	—			
Other Contract Costs						
Labor & Ovhd Accrual	169,300 00					
G.O.M. Inventory	1,158,677 45	1,158,677 45				
Instrumentation	- 0 -					
Total	1,327,977 45	1,158,677 45				
Total Airplanes	11,380,917 76	1,404,621 27	751,133 85	231521 85	9229 06	
Total Hours	1,413,850 5	249928	93,841 9	32,068 5	1,376 2	

5204	5205	5210	5211	5212	5213	5214	5221	52
27190	19278	45422	43951392	2085942	339523	46	92525	15
203	-0-	530	72,7018	2,8180	96	-0-	350	3

1	5232	5233	5234	5235	5239	5240	5266	5268 *5269
					5,315 57	-0-	-0-	-0-
							169,300 00	
				-0-	-0-	-0-	169300 00	-0-
066	9021 43	5556 20	3238 60	160 71	87220 00	26063 31	169300 00	1480 72
14		1,245 8	720 0	-0-	3,793 9	4,728 0	-0-	-0-

	5240	5266	5268 *5269	5261	Eng + Tooling Costs
57	-0-	-0-	-0-	-0-	1,584,672.85
		169,300.00			
	-0-	169,300.00	-0-	-0-	-0-
00	26,063.31	169,300.00	1,430.72	89,484.48	8,125,788.24
9	4,728.0	-0-	-0-	-0-	1,175,084.3

Accumulated Mockup & Proofing Costs
Contract A 3(600)-5942 Product Phase
September 30, 1953

	Total	5250	5257
Factory Production:			
Labor Hours	38,156.3	21,881.9	16,274.4
Labor Costs	71,268.60	40,498.57	30,770.03
O/T Premium	6,571.62	3,127.17	3,444.45
Overhead	91,689.58	52,582.21	39,107.37
Material	22,528.25	7,981.21	14,547.04
Subcontract			
Other Costs			
Total	192,058.05	104,189.11	87,868.89
Engineering:			
Labor Hours			
Labor Costs			
O/T Premium			
Overhead			
Material	17.04		17.04
Subcontract			
Other Costs			
Total	17.04	—0—	17.04
Tool Engineering			
Labor Hours	40.0	40.0	
Labor Costs	87.10	87.10	
O/T Premium	9.01	9.01	
Overhead	62.88	62.88	
Material			
Subcontract			
Other Costs			
Total	158.99	158.99	—0—
Tool Manufacturing			
Labor Hours	217.0	18.0	199.0
Labor Costs	414.32	34.47	379.85
O/T Premium	7.90	7.90	
Overhead	521.44	43.25	478.19
Material	59.78	42.42	16.86
Subcontract			
Other Costs	459.27	459.27	
Total	1,462.21	587.31	874.90
Grand Total	193,696.29	104,935.41	88,760.83
	38,413.3	21,939.9	16,473.4

Accumulated Costs of Spare Parts
Contract AF 33(600)-5942
September 30, 1953

	Total	5209	5219	5236	5237	5
Factory Production						
Labor Hours	4195.7	4164.6	24.6	.5	6.0	
Labor Costs	7,767.29	7,711.79	44.49	.81	10.20	
O/T Premium	344.65	343.85			.80	
Overhead	10,082.26	10,007.53	59.11	1.20	14.42	
Material	29,135.17	3,773.89	40.16		6.37	
Subcontract						
Other Costs						
Total	47,329.37	21,837.06	143.76	2.01	19.05	
Engineering:						
Labor Hours	300.3				300.3	
Labor Costs	590.32				590.32	
O/T Premium	34.20				34.20	
Overhead	675.07				675.07	
Material						
Subcontract						
Other Costs						
Total	1,299.59	-0-	-0-	-0-	1,299.59	-
Tool Engineering:						
Labor Hours	3084.9					3,
Labor Costs	6,714.27					6,
O/T Premium	275.48					2
Overhead	4,849.46					4,
Material						
Subcontract						
Other Costs						
Total	11,839.21	-0-	-0-	-0-	-0-	11,
Tool Manufacturing						
Labor Hours	3582.2					3,5
Labor Costs	6,824.69					6,8
O/T Premium	614.32					6
Overhead	8,608.02					8,
Material	1,185.83			41.42		1,
Subcontract	341.50					3
Other Costs						
Total	17,574.36	-0-	-0-	41.42	-0-	17,5
Total Spares	78,042.53	21,837.06	143.76	43.43	1,318.64	29
	11,163.1	4,164.6	24.6	.5	306.3	6

47	5260
	25,327 49
-0-	25,327 49
-0-	-0-
84 9	
14 27	
75 48	
49 46	
39 21	-0-
82 2	
24 69	
14 32	
08 02	
44 41	
41 50	
32 94	-0-
72 15	25,327 49
67 1	-0-

Accumulated Static Test Program

Contract AF 33( )-5942 Production Phase

September 30, 1953

	Total	5272	5291
Factory Production			
Labor Hours	27612.9	27,500.6	112.3
Labor Costs	50,629.58	50,425.01	204.57
O/T Premium	2,609.65	2,593.53	16.12
Overhead	66,353.81	66,083.95	269.86
Material	16,490.67	9,308.86	7,181.81
Subcontract	13,220.89	1,834.78	11,386.11
Other Costs			
Total	149,304.60	130,246.13	19,058.47
Engineering:			
Labor Hours	1,193.7		1,193.7
Labor Costs	2,929.30		2,929.30
O/T Premium	148.22		148.22
Overhead	2,683.43		2,683.43
Material	15.12		15.12
Subcontract			
Other Costs			
Total	5,776.07	-0-	5,776.07
Tool Engineering			
Labor Hours	842.4	842.4	
Labor Costs	1,982.85	1,982.85	
O/T Premium	17.72	17.72	
Overhead	1,324.26	1,324.26	
Material			
Subcontract			
Other Costs			
Total	3,324.83	3,324.83	-0-
Tool Manufacturing			
Labor Hours	6,266.7	6,262.2	4.5
Labor Costs	12,158.30	12,149.74	8.56
O/T Premium	1,058.99	1,058.01	.98
Overhead	15,058.89	15,048.07	10.82
Material	2,682.53	2,680.60	1.93
Subcontract			
Other Costs	868.52	860.49	8.03
Total	31,767.23	31,736.91	30.32
Grand Total	190,172.73	165,307.87	24,864.86
	35,915.7	34,605.2	1,310.5

Other Contract Costs
Contract AF (600)-5942 Producti Phase
September 30, 1953

	Total	5270	5271
Factory Production			
Labor Hours	110	109	1
Labor Costs	17.52	17.36	.16
O/T Premium			
Overhead	26.44	26.20	.24
Material	37.57	37.57	
Subcontract			
Other Costs			
Total	81.53	81.13	.40
Engineering:			
Labor Hours			
Labor Costs			
O/T Premium			
Overhead			
Material			
Subcontract			
Other Costs			
Total	-0-	-0-	-0-
Tool Engineering			
Labor Hours			
Labor Costs			
O/T Premium			
Overhead			
Material			
Subcontract			
Other Costs			
Total	-0-	-0-	-0-
Tool Manufacturing			
Labor Hours	410	410	
Labor Costs	76.76	76.76	
O/T Premium	.93	.93	
Overhead	98.52	98.52	
Material	56.09	56.09	
Subcontract			
Other Costs	158.33	158.33	
Total	390.63	390.63	-0-
Grand Total	472.11	471.76	.40
	520	519	1

Control Sheet

Contract AF 3(600)-5942 Producti Phase

68r

September 30, 1953

Page 1 of 2

W.O. Number	G.O. Ov'hd	Total	Total Less G.O. Ov'hd.	Hours
5200	1506 75	247450 57	245943 82	24992 8
5201	5747 64	756881 49	751133 85	93841 9
5202	1548 51	233070 36	231521 85	32068 5
5203	35 70	9264 76	9229 06	1376 2
5204	19	272 09	271 90	20 3
5205	—	192 78	192 78	—
5210	2 42	456 64	454 22	53 0
5211	2671 43	442185 35	439513 92	72701 8
5212	131 29	20990 71	20859 42	2818 0
5213	06	3395 29	3395 23	9 6
5214	—	46	46	—
5221	—	925 25	925 25	35 0
5231	21 38	1562 04	1540 66	361 4
5232	—	9021 43	9021 43	—
5233	60 36	5610 56	5550 20	1245 8
5234	17 38	3255 98	3238 60	720 0
5209	118 20	21,934 84	21,816 64	4,159 7
5219	61	144 37	143 76	24 6
5235		160 71	160 71	—
5236	04	43 47	43 43	5
5237	47	1,319 11	1,318 64	306 3
5239	229 88	91,607 79	91,377 91	3,793 9
5240	65,194 72	2,385,901 34	2,320,706 62	1,005,025 5
5241	4,825 76	392,301 80	387,476 04	83,532 8
5242	1,176 75	99,994 60	98,817 85	19,650 7
5243	123 67	8,952 60	8,828 93	1,988 8
5244	218 25	20,029 38	19,811 13	4,449 2
5245	7 98	597 77	589 79	135 9
5246	2,765 71	249,044 19	246,278 48	54,274 1
5247	417 39	29,789 54	29,372 15	6,667 1
5248	421 84	64,552 23	64,130 59	10,774 8
5249	1 38	121 20	119 82	22 5
5266		164,200 00	164,200 00	—
5268		221 72	221 72	—
5269		1,169 00	1,169 00	—
5250	1,460 17	106,395 [illegible]	104,935 41	21,939 9
5253	1,045 82	115,667 35	114,621 53	21,598 8
5257	855 70	89,616 53	88,760 83	16,473 4
5258	1,094 70	107,634 05	106,539 35	19,281 6
5270	3 96	475 72	471 76	51 9
		10691551 20		

Control Sheet
Contract AF 33(600)-5942 Production Phase
September 30, 1953

Page 2 of 2

W.O. Number	G.O. O'hd	Total	Total Less G.O. O'hd	Hours
5271		40	40	1
5272	2622 55	167,930 42	165307 87	34,605.2
5291	91 63	24,956 49	24,864 86	1,310.5
5260	3 16	25,330 65	25,327 49	-0-
5261		90,346 85	90,346 85	
5290	6 65	5,387 84	5,381.19	96.6
5292	4533 55	278,489 10	273,955.55	59,020.0
5293	999 59	113,045.13	112,045.54	21,482.3
5294	07	07		-0-
5297		19 00	19 00	- -
Total	99,963 31	11,397,057 15	11,297,093 84	1,620,861.0
		2		2

Airplane Schedule

Contract AF 33(600)-23903 - Eng & Prod. Tooling & Design Costs - Model & Trainer
September 30, 1953

	Total	5300	5339	5340	5341	5
Factory Production						
Labor Hours	42		42			
Labor Costs	7 37		7 37			
O/T Premium						
Overhead	10 09		10 09			
Material	5 17	4 74	9 91			
Subcontract						
Other Costs						
Total	22 63	4 74	27 37	-0-	-0-	-
Engineering						
Labor Hours	9,417 6			9,111 6		
Labor Costs	29,733 37			28,649 93		1,
O/T Premium	1,287 86			1,246 41		
Overhead	21,170 77			20,482 88		1
Material						
Subcontract						
Other Costs	336 68		85 94	250 74		
Total	52,528 68	-0-	85 94	50,629 96	-0-	1,8
Tool Engineering						
Labor Hours	298 0			298 0		
Labor Costs	991 06			991 06		
O/T Premium	30 12			30 12		
Overhead	468 45			468 45		
Material						
Subcontract						
Other Costs						
Total	1,489 63	-0-	-0-	1,489 63	-0-	-
Tool Manufacturing						
Labor Hours						
Labor Costs						
O/T Premium						
Overhead						
Material	12 78			12 78		
Subcontract						
Other Costs	576 65			573 98	2 67	
Total	589 43	-0-	-0-	586 76	2 67	-
Transfers from Other Div.	91,500 92	-0-	-0-	91,500 92	-0-	-
Labor & Overhead Accrual	1,300 00					
Grand Total	147,431 29	4 74	113 31	144,207 27	2 67	1,8
Total Hours	9,719 8	-0-	4 2	9,409 6	-0-	3

17 5366

-0- -0-

060
8344
4145
8789

1278 -0-

-0- -0-

-0- -0-

-0-

	1,300 00
1278	1,300 00

060

Control Sheet

Contract 33(600)-23903 Model Trainer

September 30, 1953

W.O. Number	G.O. Ov'hd	Total	Total Less G.O. Ov'hd		Hours
5300		4.74	4.74		
5339		113.31	113.31		4.2
5340	626.92	144,834.19	144,207.27		9,409.6
5341		2.67	2.67		
5347	15.96	1828.74	1,812.78		306.0
5350	30.96	1,920.99	1,890.03		428.5
5355	174.31	15,628.64	15,454.33		3,534.6
5393		61.74	61.74		
5366		1,300.00	1,300.00		
	848.15	165685.54	164,837.39		13,682.9
			2		2

G.O.M Inventory
Receipts & Usage by Subaccount.
September 30, 1953

Schedule I

Work Order Number	Total	151	152	157	* 251 252	6
5046	6,625.82					
5047	15,685.65	4.70				
5065	570,015.88	644,159.28	166,446.27	193.08		
5066	584,143.98	520,425.82	94,743.17	770.21	* 41.49	
5075	10,574.94	21,047.33	31,303.69			
5076	61,387.72	17,661.03	235,275.87			
5081	148.02	203.08	120.65			
5082	624.46	7,209.02	3,174.70	159.52	12.44	
5083	5,479.69	2,560.57	4,096.81	175.00		
5086	14.57	745.20	1,283.23			
5088	83.60	702.07	1,145.96			
5090 s/b 5065	250.20	250.20				
5091	30,395.06	31,264.30	24,428.71	2,314.33		
5092	139,789.57	163,392.44	64,457.40	5,108.99		
5093	347,862.60	136,273.62	394,661.23	8,222.83	* 450.21	
5096	58,761.58	60,843.61	12,470.66	16		
5098	46,984.49	57,430.27	9,856.17	379.42		
5099	16.20	16.20				
Total	1,723,496.11.	1664188.64	1043466.02	17323.54	504.14	9

Recap. Schedule II
Experimental
Production
* Ideal Body.
** Trainer

Recap.	
Experimental Phase	
152	1,043,166.02
252	12.44
681	908.37
852	88.96
951	27,652.38
952	426,495.59
953	6,579.90
959	18,929.26
Total Exp G.O.M Inv.	564,818.66
Production Phase	
151	1,664,188.64
157	17,323.54
251	491.70
851	6,169.61
951	379,488.58
952	1,009.46
953	7,657.94
954	19.10
959	141,320.96
Total Prod G.O.M Inv.	1,158,677.45

* Ideal Body Phase Includ

** Trainer Phase will
takes place

1	852	951	952	953	954	959
		6,184.18	254.74	186.90		
						15,680.95
	25.45	112,115.80	99,089.66	2,069.33	2.40	27,480.11
32.87	5,738.09	133,266.45	50,785.44	4,688.17		115,900.51
		52,002.47	4,648.02	1,273.03		2.44
75.50	105.47	270,135.02	31,017.19	1,620.95		11,821.49
		302.82	94.24	74.69		
		9,291.45	35.73	603.54		
		9,757.16	1,482.23	1,072.68		
		1,803.96	204.36	5.52		
		1,791.30	105.25	35.03		
	46.17	9,196.28	17,900.47	268.15		293.55
	27.27	36,635.19	44,806.02	1,897.56	16.70	9,843.06
	233.41	29,965.21	152,859.19	173.55		8,980.75
	73.75	4,474.98	8,974.81	84.27		1,093.04
	270.80	4,120.45	15,757.18	558.27		516.22
08.37	6258.57	407140.96	427505.05	14237.84	19.10	160250.22
	88.96	27,652.38	426,495.59	6,579.90		18,929.26
	6,169.61	379,488.58	1,004.05	7,638.53	19.10	141,320.96
				19.41		
			5.41			
	6258.57	407,140.96	427,505.05	14,237.84	19.10	160,250.22
	2	2	2	2	2	2

ed as a part of Production phase

be included as part of production until transfer of accountability

Total G.O.M. Inventory	1,723,496.11
Instrumentation	81,938.77
Total 500.0W.O. "C Run"	1,805434.88

Production G.O.M. Inventory Usage Schedule II
Usage by Subaccount
September 30, 1953

Page 1 of 2

W.O. Number	951	952	953	954	959	852
5200	798 38					
5201	163996 71	216 31			116238 80	
5202	67671 46	41 43			18090 30	
5203	2592 85				411 11	
5204					98	
5205					1 09	
5210	225 47					
5211	53546 67				1616 15	
5212	4790 55				6 00	
5213	21 14					
5214	—					
5221					742 82	
5231	3 75					
5232	6947 91				1343 01	
5233	128 56	41				
5234	11 91					
5209	1,763 87	388 27			1,564 16	
5219	5 21				34 92	
5240	4,203 95		5,641.90		155 09	
5241	1,139 56		650.55			
5242			948 43			
5243	50 17					
5244			840 35			
5245	12					
5268	321 72					
5246			6 73			
5247	1 51		5 00			
5248	363 02	10	58 28	16 70		
5249	15 37					
5250	5543 21	28 78	42 42			
5253	163 99					
5258	5108 10	30 15		2 40		
5270	32 57					
5272	8,381 16	271 28	36 68		193 09	
5291	227 76	244 47	1 93		6,701 96	
5290	2,503 34		2 45			
5292	7605 68	135 36	3 09			
5293	3,883 55		72			
5235					144 71	
5257	13,606 44	29 75				
5260	23914 36	51 63			26 77	
Total	279488 55	1,004 05	7638 53	19 10	141320 96	-0-

Report No. 9-11-4

Summarization of Model 8 Accumulated Program Costs

Contracts "AF [redacted] and [redacted](600)-22903

September 30, 1953

Page 1 of 2

	Contract AF 33(600)-5942				
	Total	Prototype	Production	Flight Test Costs	Ideal Body Costs
Factory Production					
Labor Hours	1381867.1	781,546.5	394,374.6	1,924.4	4021.6
Labor Costs	2550354.31	1,828,094.98	711,129.74	3,568.13	7561.46
O/T Premium	269940.81	215,164.65	54,198.66	251.61	325.89
Overhead	3272485.30	2,310,523.69	947,678.39	4,619.32	9663.90
Material	1356064.70	768,503.61	578,267.80	8,725.76	567.53
Subcontract	410500.76	142,367.81	268,132.95		
Other Costs	62660.05	37,829.40	24,400.16	430.49	
Total	7922005.93	5,302,484.14	2,583,807.70	17,595.31	18,118.78
Engineering:					
Labor Hours	1237889.3	1,071,752.9	34,552.1	126,911.7	4672.6
Labor Costs	3398624.37	2,963,753.28	94,047.45	325,636.02	15,187.62
O/T Premium	208889.37	167,604.39	5,788.29	34,342.15	1,154.54
Overhead	2727526.61	2,354,511.61	77,525.20	284,986.39	10,504.01
Material	270979.90	212,514.99	3,385.59	55,079.32	
Subcontract					
Other Costs	44019.18	41,781.15	2,238.03		
Total	6650039.43	5,740,165.42	182,984.56	700,043.88	26,846.17
Tool Engineering					
Labor Hours	260911.8	1,311.2	259,595.1	5.5	
Labor Costs	607592.66	3,491.01	604,089.77	11.88	
O/T Premium	52136.19	79.19	52,057.00		
Overhead	408576.44	1,899.56	406,669.12	7.76	
Material	420.60	321.94	98.66		
Subcontract	222718.56		222,718.56		
Other Costs					
Total	1291444.45	5,791.70	1,285,633.11	19.64	-0-
Tool Manufacturing					
Labor Hours	1157810.9	247,014.6	910,753.3	43.0	
Labor Costs	2226340.01	471,297.97	1,754,961.65	80.39	
O/T Premium	173698.86	50,649.80	123,049.06		
Overhead	2775037.62	588,333.32	2,186,600.97	103.33	
Material	1038948.35	229,934.71	808,994.23		19.41
Subcontract	225377.68	10,501.41	214,876.27		
Other Costs	195031.06	52,525.73	142,505.33		
Total	6634435.58	1,40[illegible]	5,235,957.51	183.72	19.41

Contract AF33(600)-23903

Trainer

2,722 9
5,102 54
517 58
6,543 13
14 20

12,177 45

9,520 6
30,143 41
1,314 23
21,402 31
49 75

336 68
53,246 38

298 C
991 06
30 12
468 45

1,489 63

263 49

737 56
1,001 05

Report No. 9-11-4

Summarization of Model 8 Accumulated Program Costs

Sept. 30, 1953

Page 2 of 2

	Total	Contract AF33(600)-5942 Prototype	Production	Flight Test Costs	Ideal Body Costs
Flight					
Labor Hours	9.5	9.5			
Labor Costs	32.65	32.65			
O/T Premium					
Overhead	78.01	78.01			
Material	6360.09	1,296.19		5,063.90	
Subcontract					
Other Costs	9.27	9.27			
Total	6480.02	1,416.12	-0-	5063.90	-0-
Wind Tunnel					
Labor Hours	39832.0	39255.6		76.4	
Labor Costs	92670.53	92,418.72		251.81	
O/T Premium	3990.27	3,960.07		30.70	
Overhead	50575.61	50049.17		546.44	
Material	3478.72	3478.72			
Subcontract	51803.92	51,803.92			
Other Costs					
Total	202539.55	201,710.60	-0-	828.95	-0-
Transfers from Other Div.	1729927.64	36.23	1,729,891.41		-0-
Other Contract Costs					
No Overhead Costs	141.07			141.07	
Labor + Ovhd Accrual	328500.00	147,500.00	169,300.00		16700.00
GOM Inventory	1723496.11	564,818.66	1,158,677.45		
Instrumentation	81938.77	81,938.77			
Unreimbursable Cost	66.94	66.94			
Total	2134142.89	789,324.37	1,327,977.45	141.07	16700.00
Total Division Costs	26571015.49	13,444,172.92	12,341,281.74	723,876.47	61,684.36
General Office Ovhd.	178,066.24	172,998.52	124,382.86	6.71	678.15
Total Costs Inc. GO Ovhd.	26869081.73	13617171.44	12465664.60	723883.18	62362.51
	4,278,3206	2,341,3703	1,599,2751	128,9610	8,6942

Contract AF33(600)-5942
Trainer

1,125 4
2,668 50
704 45
1,249 01

4,121 96

91,500 92

1,300 00

1,300 00

164,837 39

1,062 89

165900 28

136669·

Prototype G.O.M. Material Usage — Schedule II
Usage by Sub-account
September 30, 1953 — Page 2 of 3

W.O. Number	951	952	953	954	959	852
5100	10 80	1 63				
5101	544 65	153,144 91			15,135 45	
5111	27 12	64,063 59				
5121	43 28	128,332 53	27 59			
5122		1 30				
5132		7,239 46				
5168	41					
5140	13 47	1072 50	640 81			
5141	360 86	07				
5144		28				
5146		5 19				
5147	170 94					
5150	843 05	572 78	5,399 94			
5153	4925 76	141 28				18 59
5155	728 40	1,903 72				
5190	6,294 82	14,593 25	55 24		2368 85	31 30
5191	7,415 14	4,003 69	456 32		20 86	39 07
5192	2315 47	7,460 69			1,396 52	
5193	1,233 84	37,339 28			7 58	
5194	2,163 54	6,556 05				
5196	647 89	73 57				
Total	27,652 38	426,495 59	6,579 90	-0-	18,929 26	88 96

Trainer G.O.M. Material Usage

Schedule II

Usage by Sub-account

September 30, 1953

Page 3 of 3

W.O. Number	951	952	953	954	959	852
5550		4 87				
5555		54				
Total		5 41				

G O M. Usage
Valca Body Change
September 30, 1952

WO, Number	951	952	953
5450			1941
Total			1941

STATEMENT OF ACC
CONTRACT AF 3
31 July

	TOTAL PROJECT COSTS	SPARES	SPECIAL TOOLS & GR. EQUIPMENT	MOBILE TRAINING UNITS	ACTUAL PROJECT COSTS
ENGINEERING					
DESIGN AND LIAISON					
Direct Labor Hours	714 505 3		81 518 1	29 583 4	7 529 099 3
Direct Labor Costs	19 995 710 53		223 311 41	87 103 69	19 655 290 4
Overtime Premium	1 273 965 83		9 204 65	4 626 07	1 259 635 1
Overhead	17 149 300 74		195 185 95	73 594 16	16 880 520 6
Subcontract Costs	937 489 73			412 990 64	524 499 6
Material & Other Costs	13 831 350 00		31 940 00	47 998 86	13 741 411 1
Ground Support & Equip.	945 889 52				945 889 5
Fort Worth Activity	39 065 88				39 065 8
Total	54 162 772 53		460 142 01	626 307 82	53 076 322 7
SERVICE PUBLICATIONS					
Direct Labor Hours	232 937 8				232 937 8
Direct Labor Costs	529 341 18				529 341 1
Overtime Premium	34 574 64				34 574
Overhead	555 976 74				555 976 7
Subcontract Costs					
Material & Other Costs	247 117 15				247 117 1
Total	1 367 509 71				1 367 5[illegible] 7
FIELD SERVICE REP.					
Direct Labor Hours	23 419 0				23 419 0
Direct Labor Costs	72 838 24				72 838 2
Overtime Premium	3 624 73				3 624 7
Overhead	12 705 23				12 705 2
Travel & Per Diem, etc.	64 017 80				64 017 8
Total	153 186 60				153 186 6
EDWARDS ENGINEERING					
Direct Labor Hours	778 636 1				778 636 1
Direct Labor Costs	2 174 170 52				2 174 170 5
Overtime Premium	121 831 41				121 831 4
Overhead	2 626 886 82				2 626 886 8
Total	4 922 888 75				4 922 888 7
LEXINGTON					
Direct Labor Hours	9 181 0				9 181
Direct Labor Costs	35 567 57				35 767 5
Overtime Premium	24 73				24 7
Overhead	37 193 36				37 193 3
Total	76 [illegible]				76 385

OF ACCUMULATED COSTS
CT AF 33(600)-[illegible]
1 July 1958

UAL JECT TS	42 YF-F-102A ALL VERSIONS	POST PRODUCTION PROGRAM	FLIGHT TEST PROGRAM	INSTRUMENTATION PROGRAM
099 3	3966 075 5	62 0	1365 525 2	1646 826 6
5 241 43	11 474 959 57	2 365 78	4 013 106 42	4 194 425 66
665 11	654 123 42	10	207 628 75	392 812 73
0 530 63	9 272 343 15	1 979 06	3 485 272 12	11 120 936 40
24 494 69	516 958 37		6 100 93	1 446 49
41 411 14	2 598 678 04	4 921 41	6 118 129 72	5 219 683 97
5 559 82			410 368 46	735 521 36
9 065 88	20 364 62			18 701 26
6 322 70	24 542 457 57	9 846 96	14 246 506 30	14 [illegible] 37
2 779 8	232 437 8			
9 841 18	529 841 18			
4 574 64	34 574 64			
55 976 74	555 976 74			
417 15	247 [illegible] 15			
75 [illegible] 71	1 367 549 71			
23 419 0			23 419 0	
2 838 24			72 838 24	
3 624 73			3 624 73	
12 705 23			12 705 23	
64 017 80			64 017 80	
53 186 00			153 186 00	
78 036 1	1 825 9		258 576 3	518 233 9
74 170 52	5 595 03		856 370 78	1 312 204 71
21 831 41	538 08		37 253 35	84 039 93
26 886 82	6 434 47		844 423 47	1776 628 88
22 938 75	12 567 58		1738 047 60	3 173 273 57
9 161 0	9 [illegible] 0			
967 57	[illegible]			
24 73	24 [illegible]			
7 193 36	[illegible]			
76 085 66	76 085 66			

STATEMENT OF ACC

CONTRACT AF 3

31 July

	TOTAL PROJECT COSTS	SPARES	SPECIAL TOOLS & TR. EQUIPMENT	MOBILE TRAINING UNITS	ACTUAL PROJECT COSTS
EDWARDS-MANUFACTURING					
Direct Labor Hours	252 955 3				252 955 3
Direct Labor Costs	1 804 331 36				1 804 331 36
Overtime Premium	115 066 98				115 066 98
Overhead	2,560 161 13				2560 161 1
Total	4,479 559 47				4 479 559 4
HOLLOMAN-ENGINEERING					
Direct Labor Hours	374 344 2				374 344 2
Direct Labor Costs	1116 683 67				1116 683 6
Overtime Premium	31 565 29				31 565 29
Overhead	1 367 504 08				1 367 504 0
Total	2 509 752 44				2 509 752 4
HOLLOMAN-MANUFACTURING					
Direct Labor Hours	339 179 1				339 179 1
Direct Labor Costs	533,685.04				533 685 0
Overtime Premium	27,868 15				27 868 15
Overhead	1285 367 80				1285 367 80
Total	2 146 560 99				2 146 560 9
EXPERIMENTAL FLIGHT					
Flight Hours					
Direct Labor Hours	2416 9				2 416 9
Direct Labor Costs	14 495 05				14 495 0
Overtime Premium	228.48				228 4
Overhead	9 306 25				9 306 2
Material & Other Costs	38,774.45				38 774 4
Extra Risk Compensation	74 750 00				74 750 0
Total	137 554 23				137 554 2
EXPERIMENTAL FACTORY					
Direct Labor Hours	2,517 878 6			15	2,902 877
Direct Labor Costs	5,746 076 18			334	5 746 072 8
Overtime Premium	476 854 46				476 854 4
Overhead	6,459 589 50			346	6 459 086 0
Subcontract Costs	142 199 74				142 199 7
Material & Other Costs	2,567 483 04				2 567 483 0
Fort Worth Activity					
Total	15 565 702 92			690	15 [illegible]

OF ACCUMULATED COSTS
T AF 33(600)-[illegible]
July 1958

AL ECT S	YF-F 102A ALL VERSIONS	POST PRODUCTION PROGRAM	FLIGHT TEST PROGRAM	INSTRUMENTATION PROGRAM
955 3	11 347 7		73 838 1	10 219 5
33136	28 004 46		1754 573 42	21 753 48
66 98	2 066 83		111 604 79	1 395 36
161 13	38 610 70		2487 108 27	34 442 16
559 47	68 681 99		4 353 286 48	57 591 00
[illegible] 2	2 969 2		179 464 0	171 911 0
633 17	[illegible] 120 70		644 755 99	457 206 38
165 29	453 63		18 181 66	12 935 00
504 08	10 597 03		724 534 85	632 370 20
152 44	19 773 36		1 387 472 50	1 101 506 58
179 1	22 909 1		311 901 7	4 268 3
6 [illegible] 4	67 479 64		754 305 52	11 400 88
38 15	2 504 87		25 113 79	199 49
767 80	85 115 94		1 177 741 34	22 510 52
6099	155 099 45		1 957 650 65	34 110 99
416 9	95		2 457 4	
1 445 05	32 65		14 462 40	
224 48			225 48	
926 25	7 01		9 228 24	
774 45	1 348 91		37 425 54	
7[illegible] 00			74 750 00	
55423	1 459 57		136 094 66	
27 1	2 466 916 9		204 111 6	116 849 2
072 84	4 941 907 56		458 052 72	340 113 07
854 46	426 352 18		31 475 63	18 526 65
046 64	6 075 340 05		503 598 07	360 147 92
149 74	141 162 24		37 50	
493 04	2 372 733 36		175 944 68	18 746 00
[illegible]	12 [illegible]		1169 11[illegible]	737 533 64

STATEMENT OF ACC
CONTRACT AF 3
31 July

	TOTAL PROJECT COSTS	SPARES	SPECIAL TOOLS & GR. EQUIPMENT	MOBILE TRAINING UNITS	ACTUAL PROJECT COSTS
WIND TUNNEL					
Occupancy Hours	1 355 5				1 355 5
Direct Labor Hours	76 824 8				76 824 8
Direct Labor Costs	190 411 74				190 411 74
Overtime Premium	9 048 41				9 048 41
Overhead	100 749 50				100 749 50
Subcontract Costs	118 316 13				118 316 13
Material & Other Costs	63 297 78				63 297 78
Total	481 823 56				481 823 56
TOTAL ENGINEERING	86 303 696 26		460 142 01	626 314 62	85 217 239 63
TOOLING					
TOOL ENGINEERING					
Direct Labor Hours	1 346 285 1	34 954 7	2 896 7		1 308 433 7
Direct Labor Costs	3 227 924 40	83 751 86	6 673 35		3 137 499 19
Overtime Premium	142 746 87	304 45	60 69		142 381 73
Overhead	2 288 835 94	59 712 53	6 112 02		2 223 011 39
Subcontract Costs	325 306 00				325 306 00
Fort Worth Activity	569 646 55				569 646 55
Total	6 554 459 76	143 768 84	12 846 06		6 397 844 86
TOOL MANUFACTURING					
Direct Labor Hours	4 904 111 8	8 855 1	2 238 9		4 893 017 8
Direct Labor Costs	10 099 165 23	19 492 19	4 981 53		10 074 691 51
Overtime Premium	582 561 72	133 70	9 80		582 418 22
Overhead	12 352 869 82	21 571 33	5 582 87		12 325 655 62
Raw Mat'l & Pur. Parts	3 163 230 40	2 994 81	1 660 04		3 158 575 55
Subcontract Costs	1 834 383 74	1 669 00	16 052 81		1 816 661 93
Other Costs	2 032 050 16	1 848 70	11 171 03		2 019 030 43
Fort Worth Activity	2 628 703 56	1 390 15			2 627 313 41
Total	32 692 904 63	49 099 88	39 458 08		32 604 346 67
PLANT ENGINEERING					
Direct Labor Hours	409 816 5	56 0	16 0		409 744 5
Direct Labor Costs	886 960 63	119 67	32 01		886 808 95
Overtime Premium	20 020 59		7 54		20 013 05
Overhead	1 097 092 07	146 06	39 44		1 096 896 57
Material & Other Costs	1 590 742 80				1 590 742 80
Total	3 594 816 09	265 73	78 99		3 594 461 37
TOTAL TOOLING	42 842 170 48	193 134 45	52 383 13		42 596 652 90

OF ACCUMULATED COSTS
CT AF 33(600)-5942
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AD- ECT S	42 YF-F-102A ALL VERSIONS	POST PRODUCTION PROGRAM	FLIGHT TEST PROGRAM	INSTRUMENTATION PROGRAM
1 355 5	1,275 0			80 5
6 824 8	73 933 8			2 891 0
411 74	181 462 63			8 949 11
048 41	8 871 28			177 13
749 50	94 041 89			6 707 61
316 13	118 316 13			
3 297 78	63 297 78			
823 56	465 989 71			15 333 85
7 239 63	40 668 674 48	9,846 96	25 135 356 79	19 403 361 40
8 433 7	1 279 796 5		16 485 9	12 151 3
7 499 19	3 071 062 34		38 287 18	28 149 67
2 381 73	140 101 45		2 051 26	229 02
3 011 39	2 160 253 94		39 947 75	22 809 70
5 306 00	325 306 00			
9 646 55	563 374 31			6 272 24
7 814 86	6 260 098 04		80 286 19	57 460 63
3 011 8	4 872 053 3		13 030 0	7 934 5
4 691 51	10 027 342 68		29 905 10	17 443 73
2 418 22	581 249 74		984 77	183 71
5 855 62	12 274 559 41		31 912 26	19 183 95
3 575 55	3 149 031 62		8 662 01	881 92
6 661 93	1 916 661 93			
9 03 043	2 012 106 13		2 260 16	4 664 14
7 313 41	2 625 909 49			1 403 92
4 346 67	32 486 861 00		73 724 30	43 761 37
4 248 5	366 341 1		43 353 4	
6 808 45	785 237 84		121 571 61	
0 013 05	12 747 35		7 265 70	
0 846 57	[illegible] 87		148 515 70	
0 20 82	14,1 [illegible] 85		189 464 95	
4 401 37	[illegible] 147 [illegible] 11		440 517 96	
6 651 90	41 894 602 45		600 528 45	101 222 00

STATEMENT OF ACC

CONTRACT AF 33

31 July 1958

	TOTAL PROJECT COSTS	SPARES	SPECIAL TOOLS & GR. EQUIPMENT	MOBILE TRAINING UNITS	ACTUAL PROJECT COSTS	Y A
MANUFACTURING						
FACTORY						
Direct Labor Hours	7,124,765 2	419,857 5	86,2[illegible] 1	2,104 5	7,[illegible]56,053 1	7
Direct Labor Costs	15,151,912 74	839,661 12	176,851 57	4,913 21	14,[illegible] 84	14
Overtime Premium	820,244 01	10,446 51	2,199 95	70 62	807,626 93	
Overhead	19,227,4[illegible] 16	1,052,608 47	214,[illegible] 62	5,120 48	17,954,841 51	17
Sub-Total	35,1[illegible]9,660 91	1,902,719 12	4[illegible]3,830 12	9,654 31	32,983,457 26	32
MATERIAL & OTHER COSTS						
Raw Mat'l & Pur. Parts	18,767,715 71	7,424,414 10	1,379,645 63	68,615 59	9,164,[illegible]	4
Subcontract	8,787,133 32	725,691 57	1,465,796 37	17,843 57	6,577,611 81	6
Excess Usage	644,438 87				6[illegible]	
Surplus & Obsolete	1,248,374 63				1,248,[illegible] 63	1
Rework	425,922 41	2,901 50			422,921 [illegible]	
Vendor Program Costs	6,701,538 71	341 50	1,[illegible] 74		6,6[illegible] 47	6
Cancellation Costs	3,124,041 32		47,[illegible] 23		3,[illegible]74,[illegible] 15	3
Sub-Total	37,693,107 65	8,163,423 67	2,871,[illegible]57 97	86,459 16	28,571,456 25	2
Travel & Per Diem						
Other Costs						
Total Factory	74,892,767 96	10,066,152 79	3,275,5[illegible] 09	96,113 47	61,454,91[illegible] 61	61
Fort Worth Costs	1,906,199 [illegible]	116,941 00		477 59	1,7[illegible] 31	1
Pomona Costs	1,776 28	176 36		321 03	1,2[illegible]	
SHIPPING						
Direct Labor Hours	162,320 5	90,977 5	11,044 7		7[illegible] 1	
Direct Labor Costs	3[illegible]5,05[illegible] 66	152,3[illegible] 26	20,471 [illegible]		13[illegible]	
Overtime Premium	3,97[illegible] 3[illegible]	1,[illegible] 66	15 66		1,[illegible]	
Overhead	404,[illegible] 62	2[illegible] 44 38	25,5[illegible] 26		177,6[illegible]	
Material & Other Costs	98,507 91	43,821 14	9,1[illegible] 31		45,[illegible] 56	
Total Shipping	811,842 36	3[illegible] 57 29	55,[illegible] 73		35[illegible] 21	
PRODUCTION FLIGHT						
Flight Hours						
Direct Labor Hours	18,3[illegible] 8				18,375 2	
Direct Labor Costs	74,[illegible]				74,[illegible]	
Overtime Premium	4,2[illegible]				4,215 [illegible]	
Overhead	167,9[illegible] 2[illegible]				1[illegible]	
Gas & Oil	128,40[illegible] 14				128,4[illegible]	
Other Costs	2,[illegible]6 38				2,7[illegible] 2[illegible]	
Total Prod. Flight	3[illegible]9,175 22				[illegible]1[illegible]5 [illegible]	

F ACCUMULATED COSTS

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1958 (Revised)

42 YF-F-102A ALL VERSIONS	POST PRODUCTION PROGRAM	FLIGHT TEST PROGRAM	INSTRUMENTATION PROGRAM
7121138 [illegible]		236 24	83[illegible]25
14017562 79		[illegible]659 25	16766 80
[illegible]450 66		5733 [illegible]	412 24
17[illegible]39[illegible]5 84		95127 54	20[illegible]21
[illegible]688014 [illegible]		1[illegible]7519 82	37918 25
4913[illegible]4 45		12[illegible]	38850 42
6[illegible]67065 58			3548 23
641483 91			
1[illegible]378 62			
422421 01			
6691[illegible] 41		40 00	600
3[illegible]744 41		135[illegible] 79	
[illegible]34		15[illegible]	42539 [illegible]
61[illegible]		213154 [illegible]	[illegible]
41747452 82		8452 [illegible]	32911 [illegible]
1114 94		33 15	
4[illegible]1 25		[illegible]36	
[illegible]		[illegible]	
532 75		[illegible]	
[illegible]		[illegible]	
[illegible]2244 59		12[illegible]	
[illegible]6875 72		[illegible] 52	
[illegible]		162[illegible]	
[illegible]		[illegible]	
[illegible]		[illegible]	
[illegible]		[illegible]	
[illegible]		[illegible]	
[illegible]		[illegible]	
[illegible]		[illegible]	

STATEMENT OF ACCU

CONTRACT AF 33(

31 July 1958

	TOTAL PROJECT COSTS	SPARES	SPECIAL TOOLS & GR. EQUIPMENT	MOBILE TRAINING UNITS	ACTUAL PROJECT COSTS
PALMDALE – ENGINEERING					
Direct Labor Hours	16,598.7				16,598.7
Direct Labor Costs	39,280.72				39,280.72
Overtime Premium	4,570.26				4,570.26
Overhead	91,053.29				91,[illegible].29
Total	134,704.27				134,704.27
PALMDALE – MANUFACTURING					
Direct Labor Hours	295,640.9		240.7		295,400.2
Direct Labor Costs	663,992.94		536.60		663,456.34
Overtime Premium	59,048.15		128.40		58,919.75
Overhead	1,396,610.20		1,314.93		1,395,295.27
Total	2,119,651.29		1,979.93		2,117,671.36
INSPECTION					
Direct Labor Hours	624,268.2	15,858.5	2,[illegible].8	953.2	614,454.7
Direct Labor Costs	1,446,277.51	34,[illegible].71	6,311.12	2,[illegible]	1,402,813.6[illegible]
Overtime Premium	53,576.21	249.73	148.3[illegible]	261.47	52,916.63
Overhead	1,611,648.64	34,976.77	7,[illegible]	2,[illegible]3.60	1,563,259.[illegible]
Material & Other Costs	3,712.16				3,712.16
Fort Worth Activity	31,9[illegible].64	1,391.98		27.46	30,559.7[illegible]
Total	3,147,193.21	75,157.63	[illegible]	4,726.94	3,0[illegible],267.01
TOTAL MANUFACTURING	83,462,310.43	10,657,485.12	3,347,451.27	101,682.13	69,355,691.91
Division Costs	[illegible],543,177.17	[illegible],614.5[illegible]	3,35[illegible],176.41	727,9[illegible]6.75	197,[illegible].44
General Overhead	3,452,453.35	[illegible],753.64	27,[illegible]	[illegible]77[illegible]	3,346,[illegible]
Total Division Costs	26[illegible],630.55	[illegible]92[illegible],37[illegible].21	3,3[illegible],144.37	73[illegible],914.51	20[illegible],45[illegible],2[illegible]
OTHER CONTRACT COSTS					
CAP Inventory	909,[illegible].97				909,012.17
Unbillable Costs	49,317.22	31.54	1[illegible]		49,152.75
Total	95[illegible].11	31.54	[illegible]		958,165.92
TOTAL CONTRACT COSTS	26[illegible],957,76[illegible].74	1[illegible],264,[illegible].75	[illegible]	73[illegible]	20[illegible],4[illegible],366.[illegible]

Cost Accounting Department

Works Accounting Section

Plant II, Ext. 564

Report No. 41

22 August 1958

28 December 1961 (Revised)

ACCUMULATED COSTS

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42 YF-F-102A ALL VERSIONS	POST PRODUCTION PROGRAM	FLIGHT TEST PROGRAM	INSTRUMENTATION PROGRAM
32544	–	9021	124642
950024		222683	2755165
64951		22948	344127
1917552		976513	6711234
2937527		722344	9810556
2580656	6550	334343	[illegible]
[illegible]	[illegible]	7288721	740794
5125732	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	357738	[illegible]	1984511
[illegible]		747463	135773
11126131		18991704	[illegible]
[illegible]		[illegible]	151284
[illegible]		[illegible]	[illegible]
267811		[illegible]	
[illegible]		44771	39254
255528975		[illegible]	[illegible]
7164593149	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

Distribution

STATEMENT OF ACCU

CONTRACT AF 33

31 Decemb

	Total Project Costs	Spares	Special Tools & Gr. Equipment	Mobile Training Units	Actual Project Costs
ENGINEERING					
DESIGN AND LIAISON					
Direct Labor Hours	6,728,593.8		81,818.1	28,813.6	6,617,962.1
Direct Labor Costs	18,667,824.04		223,311.41	84,877.45	18,359,635.18
Overtime Premium	1,236,328.74		9,704.65	4,574.11	1,222,049.98
Overhead	15,984,086.32		195,065.36	71,416.61	15,717,604.35
Subcontract Costs	963,428.73			375,698.04	587,730.69
Material & Other Costs	10,656,430.62		18,610.29	37,832.48	10,599,987.85
Ground Support & Equip.	892,820.83				892,820.83
Fort Worth Activity	42,063.67				42,063.67
Total	48,442,982.95		446,691.51	574,398.89	47,421,892.55
SERVICE PUBLICATIONS					
Direct Labor Hours	232,937.8				232,937.8
Direct Labor Costs	529,841.18				529,841.18
Overtime Premium	34,574.64				34,574.64
Overhead	555,976.74				555,976.74
Subcontract Costs					
Material & Other Costs	206,369.55				206,369.55
Total	1,326,762.11				1,326,762.11
FIELD SERVICE REP.					
Direct Labor Hours	22,582.0				22,582.0
Direct Labor Costs	70,280.99				70,280.99
Overtime Premium	3,520.13				3,520.13
Overhead	12,184.31				12,184.31
Travel & Per Diem, etc.	49,771.69				49,771.69
Total	135,757.12				135,757.12
EDWARDS - ENGINEERING					
Direct Labor Hours	622,949.4				622,949.4
Direct Labor Costs	1,694,120.55				1,694,120.55
Overtime Premium	107,920.43				107,920.43
Overhead	2,099,617.61				2,099,617.61
Total	3,901,658.59				3,901,658.59

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Post Prod.

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T OF ACCUMULATED COSTS
ACT AF 33(600)-5942
31 December 1956

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Actual Project Costs	42 AIRCRAFT 102 YF - 102 ALL VERSIONS (8-80)	POS 8 PRODUCTION YF - 102 PROGRAM (8-82)	FLIGHT 4 TEST YF - 102 PROGRAM (8-90)	28-ST INS F - 102A (8-10)	Flight Test Program	I trumen- ation ogram	Design Deficien
17962 1	1 [illegible] 465 1	26 682 2	766 901 0	1 842 707 5	1 045 086 3	1 648 180 0	
59 635 18	3 [illegible] 637 34	71 458 73	2 317 844 86	5 [illegible] 17	3 005 194 08	4 034 540 80	
22 049 98	198 736 85	4 672 13	152 612 50	300 605 02	178 465 11	386 958 37	
17 604 35	2 891 748 53	64 595 05	1 862 132 13	4 398 830 26	2 579 651 03	3 980 447 35	
27 730 69	103 [illegible] 08	3 470 68	9 565 51	465 [illegible]	5 273 93	830 49	
99 987 85	759 364 09	397 510 97	488 800 40	641 137 39	3 715 821 96	4 597 353 04	
92 820 83					398 274 47	494 546 36	
42 063 67	328 74	260 15		13 492 84	8 579 45	18 692 49	
21 872 55+	7 541 654 63	541 967 91	4 770 955 40	11 162 365 68	7 591 550 03	13 513 368 90	
72 737 8	129 558 1		25 318 5	78 661 2			
29 841 18	265 715 42		60 008 89	184 116 58			
34 574 64	22 140 71		3 706 66	8 727 27			
55 976 74	302 336 06		59 626 80	194 013 88			
06 369 55	61 905 83		6 047 84	136 415 88			
26 762 11	172 095 66		129 390 19	325 272 86			
22 582 0					22 582 0		
70 280 99					70 280 99		
3 520 13					3 520 13		
12 184 31					12 184 31		
49 771 69					49 771 69		
5 757 12					135 757 12		
22 949 4			63 4	1 762 5	203 669 0	417 454 5	
94 120 55			143 86	[illegible]	649 009 14	1 039 516 38	
7 920 43				538 06	33 494 47	23 887 88	
9 617 61			205 64	6 228 83	667 429 00	1 425 754 14	
1 658 59			349 50	12 215 68	1 349 932 61	2 539 158 40	

STATEMENT OF ACCUMU

CONTRACT AF 33(6

31 December

	Total Project Costs	Spares	Special Tools & Gr Equipment	Mobile Training Units	Actual Project Costs
EDWARDS - MANUFACTURING					
Direct Labor Hours	617,646.6				617,050.4
Direct Labor Costs	1,458,691.54				1,458,691.54
Overtime Premium	106,164.58				106,164.58
Overhead	2,096,320.14				2,096,320.14
Total	3,661,176.26				3,661,176.26
HOLLOMAN - ENGINEERING					
Direct Labor Hours	224,468.2				224,468.2
Direct Labor Costs	643,777.67				643,777.67
Overtime Premium	23,740.94				23,740.94
Overhead	804,608.14				804,608.14
Total	1,472,126.75				1,472,126.75
HOLLOMAN - MANUFACTURING					
Direct Labor Hours	214,148.4				214,148.4
Direct Labor Costs	513,022.11				513,022.11
Overtime Premium	20,184.66				20,184.66
Overhead	793,756.29				793,756.29
Total	1,326,963.06				1,326,963.06
EXPERIMENTAL FLIGHT					
Flight Hours					
Direct Labor Hours	1,796.9				1,796.9
Direct Labor Costs	10,396.06				10,396.06
Overtime Premium	226.66				226.66
Overhead	7,050.86				7,050.86
Material & Other Costs	42,728.38				42,728.38
Extra Risk Compensation	33,500.00				33,500.00
Total	93,901.96				93,901.96
EXPERIMENTAL FACTORY					
Direct Labor Hours	2,695,636.3			1.5	2,695,634.8
Direct Labor Costs	5,441,765.84			3.34	5,441,762.50
Overtime Premium	465,325.31				465,325.31
Overhead	6,629,678.11			3.46	6,629,674.65
Subcontract Costs	140,109.49				140,109.49
Material & Other Costs	2,690,822.78				2,690,822.78
Fort Worth Activity	15,864.79				15,864.79
Total	15,383,566.32			6.80	15,383,559.52

STATEMENT OF ACCU

CONTRACT AF 33

31 Decembe

	Total Project Costs	Spares	Special Tools & Gr. Equipment	Mobile Training Units	Actual Project Costs
WIND TUNNEL					
Occupancy Hours	1,355.5				1,355.5
Direct Labor Hours	76,824.8				76,824.8
Direct Labor Costs	190,411.74				190,411.74
Overtime Premium	9,048.41				9,048.41
Overhead	100,749.50				100,749.50
Subcontract Costs	118,316.13				118,316.13
Material & Other Costs	63,297.78				63,297.78
Total	481,823.56				481,823.56
TOTAL ENGINEERING	76,226,718.68		446,691.51	574,405.69	75,205,621.48
TOOLING					
TOOL ENGINEERING					
Direct Labor Hours	1,338,088.0	34,641.6	2,764.2		1,300,682.2
Direct Labor Costs	3,207,835.82	82,844.02	6,341.47		3,118,650.33
Overtime Premium	141,978.08	304.45	60.69		141,612.94
Overhead	2,268,742.84	59,106.49	5,760.74		2,203,875.61
Subcontract Costs	325,306.00				325,306.00
Fort Worth Activity	572,251.60	4.13			572,247.47
Total	6,516,114.34	142,259.09	12,162.90		6,361,692.35
TOOL MANUFACTURING					
Direct Labor Hours	4,894,768.5	7,122.4	2,238.9		4,885,407.2
Direct Labor Costs	10,076,674.74	15,403.68	4,981.56		10,056,289.50
Overtime Premium	582,332.57	89.78	9.80		582,232.99
Overhead	12,329,302.24	17,177.99	5,570.28		12,306,553.97
Raw Mat'l & Pur. Parts	3,163,767.84	2,724.75	1,660.04		3,159,383.05
Subcontract Costs	1,741,638.16	1,667.00	15,584.81		1,724,386.35
Other Costs	1,959,677.56	1,405.58	5,127.03		1,953,142.95
Fort Worth Activity	2,661,891.50	497.26			2,661,394.24
Total	32,515,284.61	38,968.04	32,933.52		32,443,383.05
PLANT ENGINEERING					
Direct Labor Hours	400,639.4	56.0	16.0		400,567.4
Direct Labor Costs	862,039.04	119.67	32.01		861,887.36
Overtime Premium	19,881.69		7.54		19,874.15
Overhead	1,066,310.57	139.74	39.44		1,066,131.39
Material & Other Costs	1,535,318.37				1,535,318.37
Total	3,483,549.67	259.41	78.99		3,483,211.27
TOTAL TOOLING	42,514,948.62	181,486.54	45,175.41		42,288,286.67

OF ACCUMULATED COSTS
CT AF 33(600)-5942
December 1956

Page 3 of 5

ctual Project Costs	2 YF - 102 (8-80)	8 YF - 102 (8-82)	4 YF - 102 (8-90)	28 - ST F - 102A (8-10)	Flight Test Program	Instrumentation Program	Design Deficienc
1,355.5	1,016.5		36.0	172.5		80.5	
76,824.8	54,766.5		11,799.8	7,373.5		2,871.0	
90,411.74	122,735.40		32,584.12	19,[illegible].11		8,749.11	
9,048.41	5,446.19		2,092.22	1,338.27		177.13	
0,749.50	71,063.65		4,223.52	18,714.69		6,707.61	
8,316.13	118,316.13						
3,297.78	4,355.92		20,796.33	38,012.53			
81,823.56	328,553.92		59,896.89	77,208.90		15,833.85	
05,621.48	16,294,596.74	864,659.56	7,185,887.69	15,684,367.28	17,995,719.43	17,180,390.78	
0,682.2		281,810.9	221,340.4	776,513.8	10,382.5	10,634.6	
8,650.33		663,680.67	534,829.15	1,872,187.16	23,480.43	24,472.92	
1,612.94		46,041.34	23,894.96	70,165.15	1,419.38	22.11	
03,875.61		460,642.21	373,789.83	1,325,487.31	24,563.58	19,382.68	
25,306.00		325,306.00					
2,247.47		469,298.32		96,744.15		6,205.00	
1,692.35		1,964,965.54	932,522.94	3,364,558.77	49,463.39	50,152.71	
5,407.2	78,211.2	1,319,876.5	1,197,324.2	2,276,431.4	7,539.6	5,824.3	
56,289.50	142,538.73	2,577,873.18	2,461,432.01	4,845,414.50	16,528.73	12,438.15	
2,232.99	5,877.66	166,728.59	167,321.67	241,320.23	905.25	72.57	
6,553.97	175,416.26	3,308,492.60	3,671,031.00	5,719,615.55	18,117.24	13,881.32	
59,383.05	36,107.90	1,728,433.37	410,462.11	772,672.03	11,019.42	688.22	
24,386.35		557,303.58	152,349.42	1,069,653.29			
53,142.95	1,522.28	302,614.75	677,573.55	947,937.68	1,260.16	4,664.23	
61,394.24		2,147,374.17		512,260.19		1,718.88	
3,383.05	361,533.03	10,986,400.24	6,942,254.12	1[illegible],572.47	48,531.50	23,471.39	
0,567.4	967.6	319,570.2	16,221.8	32,533.9	36,723.9		
1,887.36	1,874.00	[illegible]	[illegible]	70,914.76	65,050.2		
9,874.15	7.19	[illegible]	121.26	1,677.06	7,129.69		
6,131.39	2,291.82	[illegible],170.74	25,236.25	110,675.63	124,[illegible].14		
5,318.37		[illegible]	11,164.40	766,997.51	141,222.46		
3,211.27	4,103.82	2,892,645.23	66,376.00	969,656.71	366,405.31		
88,286.67	365,636.05	15,046,014.01	7,938,154.06	18,400,163.95	454,694.50	83,624.10	

STATEMENT OF ACCUMULAT

Contract AF 33(600)

31 December 195

	Total Project Costs	Spares	Special Tools & Gr. Equipment	Mobile Training Units	Actual Project Costs
MANUFACTURING					
Direct Labor Hours	7,644,483.4	415,554.4	86,337.9	1,890.5	7,140,700.6
Direct Labor Costs	15,105,663.11	829,973.18	185,590.40	3,948.03	14,086,151.50
Overtime Premium	819,384.31	10,274.17	2,099.42	60.66	806,950.64
Overhead	19,171,724.56	1,641,290.46	213,478.89	4,632.86	17,912,322.35
Raw Mat'l & Pur. Parts	17,899,639.54	6,941,339.28	949,557.10	42,294.37	9,961,448.79
Subcontract Costs	8,482,919.17	464,424.25	1,179,297.43	20,325.67	6,818,871.82
Excess Usage	689,359.52				689,359.52
Surplus & Obsolete	1,163,905.90				1,163,905.90
Freight	95,833.63	1,383.48	8.20		94,441.95
Rework	392,050.04	2,307.25			389,742.79
Program Costs	6,239,824.24	341.60	1,322.74		6,238,160.00
Cancellation Costs	2,710,649.99				2,710,649.99
* Other Costs	173,789.64	7,436.56	737.60	1,452.17	164,161.31
Fort Worth Activity	1,099,412.20	105,781.03	42.10		993,589.07
Pomona Activity	566.51	164.65		251.25	150.61
Total Manufacturing	74,044,722.36	9,414,717.78	2,522,133.55	77,964.41	62,029,706.27
SHIPPING					
Direct Labor Hours	125,902.2	61,534.7	10,679.3		53,688.2
Direct Labor Costs	233,225.81	114,297.10	19,782.28		99,146.43
Overtime Premium	3,557.02	1,547.13	177.69		1,832.20
Overhead	307,489.25	150,624.72	24,649.08		132,215.45
Material & Other Costs	90,123.23	33,493.53	16,281.95		40,347.75
Total Shipping	634,395.31	299,962.11	60,891.00		273,541.83
PRODUCTION FLIGHT					
Flight Hours					
Direct Labor Hours	18,375.8				18,375.8
Direct Labor Costs	74,900.03				74,900.03
Overtime Premium	4,215.57				4,215.57
Overhead	167,900.38				167,900.38
Gas & Oil	136,704.52				136,704.52
Other Costs	2,704.75				2,704.75
Total Prod. Flight	386,425.25				386,425.25

OF ACCUMULATED COSTS

t AF 33(600)-5942

December 1956

tual bject osts	2 YF-102 (8-80)	8 YF-102 (8-82)	4 YF-102 (8-90)	28-ST F-102A (B-10)	Flight Test Program	Instrumentation Program	Design Deficiency
7006		1 904 445 8	1 271 601 8	3 698 445 2	38 611 8	8 156 6	309 439
6 151 50		3 524 345 14	2 151 024 81	1 332 723 30	86 657 95	16 468 21	674 872
6 950 64		325 059 00	162 4[illegible]	307 951 62	57 733 03	409 45	65 338
2 322 35		4 578 363 68	3 242 363 87	8 933 281 14	95 073 16	20 341 67	742 958
1 448 79	638 345 94	2 235 029 3[illegible]	1 269 372 10	4 913 975 81	1 505 74	28 757 58	934 462
8 871 87	172 639 96	1 044 033 19	851 126 00	4 202 205 41		8 304 69	33 [illegible]
9 359 52	10 666 52	189 914 25	25 762 03	413 136 42			
3 905 90	27 696 77	490 594 45	371 656 05	273 958 63			
4 441 95	33 [illegible]	38 523 59	3 765 16	18 174 46		266 75	459
9 742 79		99 846 83	62 333 38	227 562 58			
8 160 00	2 5[illegible] 22	1 376 618 66	808 193 07	1 441 626 05	40 00	6 00	
0 649 99	118 80	579 688 57	2 100 616 10	30 226 52			
4 161 31	71 215 31	39 361 [illegible]	7 129 72	15 617 48	3 056 93	5 736 67	1 842
3 589 07		785 006 81	59 177 79	111 110 46	5 924 84	31 854 88	494
150 61				150 61			
9 906 27	3 572 532 50	15 626 445 17	11 544 938 02	28 222 460 49	197 991 65	112 147 90	2 452 370
53 688 2	2 995 7	22 940 3	126 0	7 445 2	20 181 0		
9 146 43	5 352 65	41 989 66	235 74	14 655 54	37 512 64		
1 832 20	17 10	332 03		154 47	1 328 63		
2 215 45	7 446 16	56 671 11	299 38	17 913 74	49 865 16		
0 347 75	1 563 07	23 260 08	41 26	3 766 73	11 982 39		
3 541 83	14 377 00	122 092 58	576 45	25 924 65	100 655 02		
8 375 8		113 7		2 030 1	16 224 00		
4 900 03		541 14		8 277 52	66 081 37		
4 215 57		46 44		788 27	3 369 86		
7 900 38		1 125 62		3 586 15	152 858 41		
6 704 52		2 490 87		60 240 19	73 972 46		
2 704 75		563 81			2 140 66		
6 425 25		4 765 46		53 242 13	278 453 96		

STATEMENT OF ACCUMULA

Contract AF 33(600

31 December 195

	Total Project Costs	Spares	Special Tools & Gr. Equipment	Mobile Training Units	Acutal Project Costs	
PALMDALE - ENGINEERING						
Direct Labor Hours	16,578.7				16,598.7	
Direct Labor Costs	39,280.72				39,280.72	
Overtime Premium	4,370.21				4,370.21	
Overhead	91,053.29				91,053.29	
Total Palmdale Eng.	134,704.22				134,704.22	
PALMDALE - MANUFACTURING						
Direct Labor Hours	287,977.3		246.7		287,726.6	
Direct Labor Costs	645,406.05		537.66		644,869.45	
Overtime Premium	58,897.00		128.40		58,768.60	
Overhead	1,369,589.26		1,314.93		1,368,274.33	
Total Palmdale Mfg.	2,073,892.31		1,979.93		2,071,912.38	
INSPECTION						
Direct Labor Hours	568,322.7	15,408.5	2,579.2	901.2	549,433.8	
Direct Labor Costs	1,276,137.30	33,405.66	5,785.44	2,290.56	1,234,655.64	
Overtime Premium	49,626.58	345.47	40.63	261.47	48,978.97	
Overhead	1,390,692.12	37,722.55	6,266.71	2,092.26	1,344,610.50	
Material	2,926.07				2,926.07	
Fort Worth Activity	2,734.95	251.49			2,483.46	
Total Inspection	2,722,117.02	71,725.19	12,292.78	4,444.41	2,633,654.64	
Division Costs	198,737,923.77	9,957,891.99	3,099,164.51	656,814.51	185,024,052.76	2
General Overhead	3,202,971.37	70,756.23	26,874.85	4,709.59	3,100,630.70	
Total Division Costs	201,940,895.14	10,028,648.22	3,126,039.36	661,524.10	188,124,683.46	2
OTHER CONTRACT COSTS						
CAP Inventory	1,808,503.61				1,808,503.61	
Unbillable Costs	63,744.10	31.54			63,712.56	
Total	1,872,247.71	31.54			1,872,216.17	
TOTAL CONTRACT COSTS	203,813,142.85	10,028,679.76	3,126,039.36	661,524.10	189,996,899.63	20

Cost Accounting Department
Works Accounting Section
Plant II, Ext. 564
Report No. 41
31 January 1957

Note: "Other Costs" was reduced by a credit of $649,777.36 processed in December 1956. The credit is a result of the following:
Employees Group Insurance refund.
Workman's Compensation Refund.
Reversal of Excess Amortization.

OF ACCUMULATED COSTS

ct AF 33(600)-5942

December 1956

Page 5 of 5

tal oject osts	2 YF-102 (8-80)	8 YF-102 (8-82)	4 YF-102 (8-90)	28-ST F-102A (8-10)	Flight Test Program	Instrumentation Program	Design Deficiency
6 598 7				3 282 4	55 21	1 246 42	
9 280 72				9 500 24	2 228 83	27 551 65	
4 370 21				699 51	229 48	3 441 22	
1 053 29				19 175 52	4 765 13	67 112 64	
4 704 22				29 325 27	7 323 44	98 105 51	
7 726 6	5 785 8	27 135 7	11 620 9	157 673 3	26 673 7	2 997 3	56 249
4 869 45	13 6[illegible] 14	60 591 67	27 118 69	354 641 67	56 523 27	6 784 02	125 270
8 768 60	25 43	1 237 24	2 469 72	3 199 81	7 045 28	464 02	15 767
8 274 33	29 769 34	144 726 55	63 [illegible] 80	681 550 26	143 082 61	11 357 71	294 717
1 912 38	43 423 91	207 445 78	92 6[illegible]	1 167 391 74	206 650 56	18 615 75	425 255
9 433 8	277 5	3 620 0	18 125 9	496 233 5	21 682 7	10 073 2	
4 655 64	659 27	7 233 61	40 942 33	1 113 152 76	48 911 84	23 255 33	
8 978 97	1 22	146 32	1 643 38	44 014 24	1 878 52	1 295 29	
4 610 50	736 12	8 940 33	44 710 94	1 215 225 82	50 448 81	23 998 48	
2 926 07				2 926 07			
2 483 46				2 373 29	110 17		
3 654 64	1 396 61	16 820 26	87 296 65	2 378 242 18	101 349 34	48 549 60	
4 052 76	20 291 994 81	31 888 195 82	26 649 512 11	66 401 028 69	19 362 771 70	17 541 423 64	2 889 125
630 70	240 952 47	360 358 89	403 172 07	1 359 609 42	362 255 46	311 706 67	62 575
4 683 46	20 532 947 28	32 248 554 71	27 052 684 18	67 760 638 11	19 725 027 16	17 853 130 31	2 951 701
8 503 61			1 308 503 61				
3 712 56	2 168 88	295 07	6 25	27 518 18	31 377 04	347 14	
2 216 17	2 168 88	295 07	1 308 509 86	27 518 18	31 377 04	347 14	
6 899 63	20 535 116 16	32 248 849 78	28 861 194 04	67 790 156 29	19 756 404 20	17 853 477 45	2 951 701

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Distribution

Blakely, J. S.
Herbig, J. R.
Higgins, A. P.
Hills, P. N. ✓
Jodka, J. J.
Jones, J. M.
Johnson, E. E.
McManus, R. H.
Moseley, M. F.
Mrvichin, M. M. ✓
Osborn, P. G.
Thetford, J. W.

4

NA-8-034

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-034
DATE 21 March 1956
MODEL F-102A

TITLE

REPORT NO. ZD-8-034

DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANE AF S/N 54-1380, 54-1381, 54-1382 and 54-1383

CONTRACT AF33(600)-23903

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF ~~PAGES~~ PARTS IV

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

REPORT NO. ZD-8-034

PART II

WAIVERS FOR AIRPLANE

SERIAL NO. 54-1381

This report is prepared to define the condition of these airplanes as of factory completion for acceptance by the Air Force.

Waivers for the following airplanes are contained in their respective part as noted.

A/C Serial Number	PART
54-1380	PART I
54-1381	PART II
54-1382	PART III
54-1383	PART IV

ANALYSIS
PREPARED BY
CHECKED BY
REVISED BY

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

A/C Ser. No. 54-1380
PAGE 1
REPORT NO. ZD-8-034
MODEL F-102A
DATE 21 March 195

		VALID	CANC.
	The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 54-1380.		
1.	Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 21 March 1956, are as follows:		
ECP NO. (CAC-F-102-)	Title		
$233R_1$	Finish Requirements - Change of:		
$1010R_1$	Main Landing Gear, Skewed Axis - Change to:		
1020	Landing Gear Warning System - Positive Warning.		
1024	Cockpit Ground Air Conditioning - Change of:		
1068	Pratt & Whitney P-23 Engine Changes - Group III.		
1076	Interim Installation of Canopy Defog.		
2.	Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 21 March 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):		
3.	Deleted		

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	5-15-56

FORM 1812-A

VALID CANC.

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force Form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 Part B of this report. (EPD - Expected Part Delivery Date)

Items denoted by circles opposite parts short refer to corresponding limitations in Paragraph 4, Part B.

CONTRACTOR FURNISHED EQUIPMENT

Quantity		Description	Part No.	VALID	CANC.
1	ⓒ	Intervalometer - Rocket Equip. Inst. Install 8-67186 (EPD 6-15-56)	UN 66-2		
1	ⓓ	Intervalometer - Missile Equip. Inst. Install 8-67186 (EPD 6-15-56)	UN 120		
8	ⓑ	Bolts, Wing Attach - Spar No. 6 (EPD Available)	BOL-113-2		
1 Ea.		Door Inst. Speed Brake Inst. Ref. 8-73674 Doors 8-73634-3 & 5 Installed (EPD 4-30-56)	8-73674-73 8-73674-75		
		GOVERNMENT FURNISHED AIRCRAFT EQUIPMENT			
1	ⓐ	Valve Recirculating Oil Install 8-22947 G.F.A.E. Part No. 660599 Short (EPD 4-30-56)	8-22947-7		

VALID CANC.

4. PART B Shortages as listed in Air Force Form 263C, which affects the performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

Refer to corresponding shortages listed in Paragraph 4, Part A denoted by circle.

1. Description: Pilot Assist - Operation of (ACA 8-16862, 8-17186, TVA 46117 Change "D" on Drawing 8-60755 and TVA 46539 on Drawing 8-60010.

Limitation: 1. Pilot assist is deactivated until the above mentioned ACA's and TVA's are accomplished.

2. Upon activation of pilot assist by incorporation of the above ACA's and TVA's, pilot assist is restricted to altitude above 25,000 feet at indicated air speeds below 360 knots.

Note: Elevator limit switches must be set at ±2.3°.

2. Description: Roll Maneuver Limitations

Limitation: The roll restrictions with or without the side slip feedback system operative are:

4. PART B (Cont.)

VALID CANC.

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.

   a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight)

   b. Do not exceed 80° per second for 360° rolls.

   c. Uncoordinated maneuvers are prohibited.

2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.

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3. Description: Pitch and Yaw Damper Operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a pitch "G" limiter, pitch damper system shall not be used below 12,000 feet altitude at speeds above 480 knots.

4. PART B (Cont.)

VALID | CANC.

4. Description: ⓐ Constant Speed Drive - Oil System for (Ref. ACA 8-15403, 8-15709, 8-16070)

Part No: GFAE #660599

Quantity: One

Limitation: Until the above ACA's are accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A. C. power may occur.

---

5. Description: Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against Drawing 8-60674 de-activates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

4. PART B (Cont.)	VALID	CANC.
6. Description: ⑥ ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type. Part No: MS 20010-34 (8 pieces per airplane) Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations: Limitation: a. Symmetrical Maneuvers Do not exceed normal load factor of 5.5g maximum. b. Asymmetrical Maneuvers 1. Do not exceed normal load factor of 3.9g. 2. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight). 3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.		
7. Description: Buzz Fix - High Speed (Ref. ACA 8-813)		

4. PART B (Cont.)

VALID CANC.

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Machine number of 1.25.

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8. **Description:** Trim Servo - Operation of

Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.

Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.

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9. **Description:** Rocket Intervalometer Installation (Ref. ACA 8-12781 NF)

Ⓒ

Part No: CVAC UN 66-2 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing rockets or opening doors in the rocket mode.

VALID CANC.

4. PART B (Cont.)

10. Description: Missile Intervalometer Installation (Ref. ECP 1034)

Part No: CVAC UN 120 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing missiles or opening doors in the missile mode.

11. Description: Windshield Anti-ice System Ref. ACA-8-16823

Remarks: Since procurement of Control Box Cont-178-1, it has become apparent that the addition of 2 power relays are necessary to handle increased load. Failure of contacts in the control box due to excessive electrical load, causes power to remain on windshield resulting in glass failure

Limitations: Do not fly in icing conditions.

Note: Transformer has been by passed by TVA 47554 on Dwg. 8-60652 permitting limited defog but no anti-ice.

4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263C, Part II.

A/C Ser. No. 54-1381

ANALYSIS	CONVAIR A DIVISION OF GENERAL DYNAMICS CORPORATION SAN DIEGO	PAGE 1
PREPARED BY		REPORT NO. ZD-8-034
CHECKED BY		MODEL F-102A
REVISED BY		DATE 21 March 56

		VALID	CANC.
	The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 43-1381.		
1.	Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 21 March 1956, are as follows:		
ECP NO. (CAC-F-102-)	Title		
$233R_1$	Finish Requirements - Change of:		
$1010R_1$	Main Landing Gear, Skewed Axis - Change to:		
1020	Landing Gear Warning System - Positive Warning.		
1024	Cockpit Ground Air Conditioning - Change of:		
1068	Pratt and Whitney P-23 Engine Changes - Group III.		
1076	Interim Installation of Canopy Defog.		
2.	Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 21 March 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):		

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	5-15-56

3. Deleted

FORM 1818-A

VALID CANC.

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force Form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 Part B of this report. (EPD-Expected Parts Delivery Date)

Items denoted by circles opposite parts short refer to corresponding limitations in Paragraph 4, Part B.

CONTRACTOR FURNISHED EQUIPMENT

Quantity		Description	Part No.	VALID	CANC.
1	ⓒ	Intervalometer - Rocket Equip. Inst. Install 8-67186 (EPD 6-15-56)	UN 66-2		
1	ⓓ	Intervalometer - Missile Equip. Inst. Install 8-67186 (EPD 6-15-56)	UN 120		
8	ⓑ	Bolts, Wing Attach; Spar No. 6 (EPD - Available)	BOL-113-2		
1 Ea.		Door Inst. Speed Brake Inst. Ref. 8-73674 Doors 8-73634-3 & 5 installed (EPD 4-30-56)	8-73674-73 8-73674-75		
		GOVERNMENT FURNISHED AIRCRAFT EQUIPMENT			
1	ⓐ	Valve Recirculating Oil Install 8-22947 G.F.A.E. Part No. 660599 Short (EPD 4-30-56)	8-22947-7		

VALID CANC.

4. PART B Shortages as listed in Air Force Form 263C, which affects the performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

Refer to corresponding shortages listed in Paragraph 4 - Part A Items denoted by circle.

1. Description: Pilot Assist - Operation of (ACA 8-16862, 8-17186, TVA 46117 Change "D" on Drawing 8-60755 and TVA 46539 on Drawing 8-60010.

Limitation:

1. Pilot assist is deactivated until the above mentioned ACA's and TVA's are accomplished.
2. Upon activation of pilot assist by incorporation of the above ACA's and TVA's, pilot assist is restricted to altitude above 25,000 feet at indicated air speeds below 360 knots.

Note: Elevator limit switches must be set at ± 2.3°.

---

2. Description: Roll Maneuver Limitations

Limitation: The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.

4. PART B (Cont.)

VALID CANC.

a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight)

b. Do not exceed 80° per second for 360° rolls.

c. Uncoordinated maneuvers are prohibited.

2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.

3. Description: Pitch and Yaw Damper Operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a pitch "G" Limiter, pitch damper system shall not be used below 12,000 feet altitude at speeds above 480 knots.

4. Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15403, 8-15709, 8-16070)

ⓐ

Part No: GFAE #660599

4. PART B (Cont.)

VALID CANC.

Quantity: One

Limitation: Until the above ACA's are accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. power may occur.

5. Description: Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against Drawing 8-60674 de-activates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

6. Description: ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.

⑥

Part No: MS 20010-34 (8 pieces per airplane)

4. PART B (Cont.) **VALID** **CANC.**

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations:

Limitation:

a. Symmetrical Maneuvers

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers

1. Do not exceed normal load factor of 3.9g.
2. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight)
3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

---

7. Description: Buzz Fix - High Speed (Ref. ACA 8-813)

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

	VALID	CANC.
4. PART B (Cont.)		
8. Description: Trim Servo - Operation of Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained. Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.		
9. Description: Rocket Intervalometer Installation (Ref. ACA 8-12781 NF) ⓒ Part No: CVAC UN 66-2 Intervalometer Quantity: One Limitation: Must be installed prior to firing rockets or opening doors in the rocket mode.		
10. Description: Missile Intervalometer Installation (Ref. ECP 1034) ⓓ Part No: CVAC UN 120 Intervalometer Quantity: One Limitation: Must be installed prior to firing missiles or opening doors in the missile mode.		
11. Description: Windshield Anti ice System Ref: ACA 8-16723 Remarks: Since procurement of Control Box Cont- 178-1, it has become apparent that the addition of 2 power relays are necessary to handle increased load. Failure of contacts in the control box due to excessive electrical load, causes power to remain on windshield resulting in glass failure.		

	VALID	CANC.
4. PART B (Cont.) Limitations: Do not fly in icing conditions. Note: Transformer has been by passed by TVA 47554 on Dwg. 8-60652 permitting limited defog but no anti-ice.		
4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263C, Part II.		

REPORT NO. ZD-8-034

PART III

WAIVERS FOR AIRPLANE

SERIAL NO. 54-1382

ANALYSIS
PREPARED BY
CHECKED BY
REVISED BY

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

A/C Ser. No. 54-1382
PAGE 1
REPORT NO. ZD-8-034
MODEL F-102A
DATE 21 March 56

	VALID	CANC.
The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 54-1382		

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 21 March 1956, are as follows:

ECP NO. (CAC-F-102-)	Title	VALID	CANC.
233R_1	Finish Requirements - Change of:		
1010R_1	Main Landing Gear, Skewed Axis - Change to:		
1020	Landing Gear Warning System - Positive Warning		
1024	Cockpit Ground Air Conditioning - Change of:		
1068	Pratt and Whitney P-23 Engine Changes - Group III		
1076	Interim Installation of Canopy Defog.		

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 21 March 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

Report No.	Title	Anticipated Scheduled Date	VALID	CANC.
ZS-8-054	Armament Loads	5-15-56		

3. Deleted

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force Form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report. (EPD - Expected Parts Delivery Date)

Items denoted by circles opposite parts short refer to corresponding limitations in Paragraph 4, Part B.

CONTRACTOR FURNISHED EQUIPMENT

Quantity		Description	Part No.	VALID	CANC.
1 Ea.		Door Inst. Speed Brake Inst. Ref. 8-73674 Doors 8-73634-3 & 5 Installed (EPD 5-15-56)	8-73674-73 8-73674-75		
8	ⓑ	Bolts, Wing Attach; Spar No. 6 (EPD - Available)	BOL-113-2		
1	ⓒ	Intervalometer-Rocket Equip. Inst'l. Inst'l. Dwg. 8-67186 (EPD-6-15-56)	UN66-2		
1	ⓓ	Intervalometer-Missile Equip. Inst'l. Inst'l., Dwg. 8-67186 (EPD-6-15-56)	UN 120		

4. PART A

GOVERNMENT FURNISHED AIRCRAFT EQUIPMENT

Quantity		Description	Part No.	VALID	CANC.
1	ⓐ	Valve Recirculating Oil Install 8-22947 G.F.A.E. Part No. 660599 Short (EPD 4-26-56)	8-22947-7		

4. PART B Shortages as listed in Air Force Form 263c, which affects the performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment of intended usage.

Refer to corresponding shortages listed in Paragraph 4 - Part A Items denoted by circle.

4. PART B (Cont.) VALID CANC.

1. Description: Pilot Assist - Operation of (ACA 8-16862, 8-17186, TVA 46117 Change "D" on Drawing 8-60755 and TVA 46539 on Drawing 8-60010.

Limitation:

1. Pilot assist is deactivated until the above mentioned ACA's and TVA's are accomplished.
2. Upon activation of pilot assist by incorporation of the above ACA's and TVA's, pilot assist is restricted to altitude above 25,000 feet at indicated air speeds below 360 knots.

   Note: Elevator limit switches must be set at ±2.3°.

2. Description: Roll Maneuver Limitations

Limitation: The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
    - a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight)
    - b. Do not exceed 80° per second for 360° rolls.
    - c. Uncoordinated maneuvers are prohibited.

4. PART B (Cont.)

VALID CANC.

2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.

3. Description: Pitch and Yaw Damper operation

Part No; Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a pitch "G" Limiter, pitch damper system shall not be used below 12,000 feet altitude at speeds above 480 knots.

4. Description: Trim Servo - Operation of

Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.

Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.

4. PART B (Cont.)

VALID CANC.

5. Description: Buzz Fix - High Speed (Ref. ACA 8-813)

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

6. Description: ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.

⑥

Part No: MS 20010-34 (8 pieces per airplane)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations:

Limitation: a. Symmetrical Maneuvers

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers

1. Do not exceed normal load factor of 3.9g.
2. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight)

4. PART B (Cont.)

VALID | CANC.

3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

7. Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15403, 8-15709, 8-16070)

ⓐ

Part No: GFAE #660599

Quantity: One

Limitation: Until the above ACA's are accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A. C. power may occur.

8. Description: Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against Drawing 8-60674 de-activates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.

			VALID	CANC.
4. PART B (Cont.)				
	Limitation:	No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.		
9.	Description:	Windshield Anti-ice System Ref: ACA 8-16723		
	Remarks:	Since procurement of Control Box Cont-178-1, it has become apparent that the addition of 2 power relays are necessary to handle increased load. Failure of contacts in the control box due to excessive electrical load, causes power to remain on windshield resulting in glass failure.		
	Limitation:	Do not fly in icing conditions		
	Note:	Transformer has been by-passed by TVA 47554 on Dwg. 8-60652 permitting limited defog but no anti-ice.		
10.	Description: Ⓒ	Rocket Intervalometer Installation (Ref. ACA 8-12781 NF)		
	Part No:	CVAC UN 66-2 Intervalometer		
	Quantity:	One		
	Limitation:	Must be installed prior to opening doors or firing rockets in the rocket mode.		

4. PART B (Cont)

11. Description: Missile Intervalometer Installation (Ref. ECP 1034) ⓓ

Part No: CVAC UN 120

Quantity: One

Limitation: Must be installed prior to opening doors or firing missiles in the missile mode.

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4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263c, Part II.

REPORT NO. ZD-8-034

PART IV

WAIVERS FOR AIRPLANE

SERIAL NO. 54-1383

ANALYSIS
PREPARED BY
CHECKED BY
REVISED BY

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

A/C Ser. No. 54-1383
PAGE 1
REPORT NO. ZD-8-034
MODEL F-102A
DATE 21 Mar 1956

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 54-1383.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 21 March 1956, are as follows:

ECP No. (CAC-F-102-)	Title	VALID	CANC.
1381 $233R_1$	Finish Requirements - Change of:		
$1010R_1$	Main Landing Gear, Skewed Axis - Change to:		
1020	Landing Gear Warning System - Positive Warning		
1024	Cockpit Ground Air Conditioning - Change of:		
1068	Pratt & Whitney P-23 Engine Changes - Group III		
1076	Interim Installation of Canopy Defog		

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 21 March 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	5-15-56

FORM 1812-A

VALID CANC.

3. Deleted

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report.
(EPD - Expected Parts Delivery Date)

Items denoted by circles opposite parts short refer to corresponding limitations in Paragraph 4. Part B.

CONTRACTOR FURNISHED EQUIPMENT

Quantity		Description	Part No.	VALID	CANC.
1 Ea.		Door Inst. Speed Brake Inst. Ref. 8-73674 Doors 8-73634-3 & 5 Installed EPD 5-15-56	8-73674-73 8-73674-75		
8	ⓑ	Bolt, Wing Attach: Spar No. 6 EPD - Available	BOL-113-2		
1	ⓒ	Intervalometer-Rocket Equip. Inst'l Inst'l. Dwg. 8-67186 (EPD-6-15-56)	UN66-2		
1	ⓓ	Intervalometer-Missile Equip.Inst'l. Inst'l., Dwg. 8-67186 (EPD-6-15-56)	UN 120		

VALID CANC.

4. PART A

GOVERNMENT FURNISHED AIRCRAFT EQUIPMENT

Quantity	Description	Part No.
1	Valve Recirculating Oil ⓐ Install 8-22947 G.F.A.E. Part No. 660599 Short (EPD 4-26-56)	8-22947-7

4. PART B Shortages as listed in Air Force Form 263c, which affects the performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment of intended usage.

Refer to corresponding shortages listed in Paragraph 4 - Part A Items denoted by circle.

VALID CANC.

4. PART B (Cont)

1. Description: Pilot Assist - Operation of (ACA 8-16862, 8-17186, TVA 46117 Change "D" on Dwg. 8-60755 and TVA 46539 on Dwg. 8-60010.

Limitation:

1. Pilot assist is deactivated until the above mentioned ACA's and TVA's are accomplished.
2. Upon activation of pilot assist by incorporation of the above ACA's and TVA's, pilot assist is restricted to altitude above 25,000 feet at indicated air speeds below 360 knots.

Note: Elevator limit switches must be set at ±2.3°.

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2. Description: Roll Maneuver Limitations

Limitation: The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
    - a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight)
    - b. Do not exceed 80° per second for 360° rolls.
    - c. Uncoordinated maneuvers are prohibited.
2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restrictions: 0 to 3.75g.

4. PART B (Cont)

			VALID	CANC.
3.	Description:	Pitch and Yaw Damper Operation		
	Part No.	Suitable Pitch "G" Limiter		
	Quantity:	One		
	Limitation:	Without a pitch "G" Limiter, pitch damper system shall not be used below 12,000 feet altitude at speeds above 480 knots.		
4.	Description	Trim Servo - Operation of		
	Remarks:	Low leve operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.		
	Limitation:	Do not engage trim servo at altitudes less than 5000 feet above the terrain.		
5.	Description:	Buzz Fix - High Speed Ref. ACA 8-813		
	Remarks:	Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.		
	Limitations:	Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.		
6.	Description: ⓑ	ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.		
	Part No:	MS 20010-34 (8 pieces per airplane)		

VALID | CANC.

4. PART B (Cont)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations:

Limitation: a. Symmetrical Maneuvers

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers

1. Do not exceed normal load factor of 3.9g.
2. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight)
3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

7. Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15403, 8-15709, 8-16070)

ⓐ

Part No: GFAE #660599

Quantity: One

Limitation: Until the above ACA's are accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. power may occur.

4. PART B (Cont) VALID CANC.

8. Description: Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against Drawing 8-60674 de-activates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

9. Description: Windshield Anti-ice System Ref: ACA -8-16723

Remarks: Since procurement of Control Box Cont-178-1, it has become apparent that the addition of 2 power relays are necessary to handle increased load. Failure of contacts in the control box due to excessive electrical load, causes power to remain on windshield resulting in glass failure.

Limitation: Do not fly in icing conditions.

Note: Transformer has been by-passed by TVA 47554 on Dwg. 8-60652 permitting limited defog but no anti-ice.

4. PART B (Cont)

10. Description: Rocket Intervalometer Installation (Ref. ACA 8-12781 NF)

Ⓒ

Part No: CVAC UN 66-2 Intervalometer

Quantity: One

Limitation: Must be installed prior to opening doors or firing rockets in the rocket mode.

11. Description: Missile Intervalometer Installation (Ref. EC 1034)

ⓓ

Part No: CVAC UN 120 Intervalometer

Quantity: One

Limitation: Must be installed prior to opening doors or firing missiles in the missile mode.

4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263c, Part II.

ZD·8-035

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION

SAN DIEGO

REPORT ZD-8-035

DATE 29 Feb. 1956

MODEL F-102A

TITLE

REPORT NO. ZD-8-035
DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANE AF S/N 53-1806

CONTRACT AF33(600)-5942

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PARTS I

~~NO. OF PAGES~~

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
A	2-14-56	WMG	Parts V & VI Replace Parts of the	Noted
			same number involving different	
			airplanes.	
			Misc. corrections throughout	
B	10-24-57	WWF	Revised to reflect configuration	Title
			at time of final acceptance	1 - 12

FORM 1812 A-4

This report is prepared to define the condition of the aircraft for final acceptance by the Air Force.

PART I:

The following items are deviations from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1806.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 24 October 1957 are as follows:

None

2. Engineering data listed in exhibit of the contract which were required to be submitted prior to 24 October 1957 but which have not been submitted as of that date, are as follows:

None

3. PART A The following are shortages as of 24 October 1957. It is anticipated that these items will be reflected in the Form DD-780-2 consisting of 4 pages dated 24 October 1957 and Form DD-250 consisting of 100 pages dated 24 October 1957.

3. PART B Flight limitations as listed in Department of Defense Form DD-781, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or the intended usage.

3. PART C Work tasks not accomplished on this airplane shall be referenced in Department of Defense Form DD-780-2 consisting of 4 pages dated 24 October 1957, and Form DD-250 consisting of 100 pages dated 24 October 1957.

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-035
DATE 1 Feb. 1956
MODEL F-102A

TITLE

REPORT NO. ZD-8-035
DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANE AF S/N 53-1806, 1807, 1811, 1812, 1817 & 1818
CONTRACT AF33(600)-5942.

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF ~~PAGES~~ PARTS VI

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
"A"	2-14-56	WMG	Parts V & VI Replace Parts of the	Noted.
			Same Number Involving Different	
			Airplanes.	
			Misc. Corrections Throughout.	

FORM 1812 A-4

REPORT NO. ZD-8-035

PART I

WAIVERS FOR AIRPLANE
SERIAL NO. 53-1806

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 53-1806.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 14 February 1956, are as follows:

ECP NO. (CAC-F-102-)	Title
$233r_1$	Finish Requirements - Change of:
$1011r_1$	MG-3 Changes Group II (Proto-type)

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 29 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	3-15-56

EXHIBIT "A": Paragraph (g)
Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbook to be replaced with regular Flight Handbook in March 1956.

3. Equipment listed in the "Equipment Approval Status Record," Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 14 February 1956.

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force Form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report.

Quantity	Description	Part No.
1	Intervalometer - Missile Equip. Inst. Instl. Dwg. 8-67186 (EPD 3-31-56)	UN 120
1	Duct Inst. Int. Anti-ice Valve Instl. 8-87048 (See Note) 4. PART B	VA 1072
2	Tank & Pylon Inst. External Fuel Inst. Ref. 8-17007 (To be accomp. during Flt. Test Prog.)	8-17005-1
1 Ea.	Pedal & Rudder Brake Inst. Inst. 8-49240 (EPD 2-27-56)	8-49936-3 8-49660-3 8-49663-3 8-49663-4
1	Valve, Recirculating Oil Instl. 8-22947 G.F.A.E. Part No. 660599 (EPD 4-1-56)	8-22947-7
2	Transformer - Windshield Anti-ice Instl. Dwg. 8-68210 (EPD - See Note) 4. PART B	TRA 294
1	Intervalometer - Rocket Equip. Instl. Instl. Dwg. 8-67186 (EPD 3-31-56)	UN 66-2
1 Ea.	Window Canopy Glass Instl. 8-73815 Interim TVA 34453 Instl. 8-73815-3 & -4 in Lieu. (EPD 4-15-56)	8-73856-7 -8

4. PART B Shortages as listed in Air Force Form 263c, which affects the performance or mission of the airplane as noted, performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

NOTE: Since this airplane is scheduled for conditional acceptance and subsequent flight testing of the Type MB-1 Rocket configuration under an accelerated program by the Contractor, the Specification Conformance Changes (Report ZM-8-162) have not been accomplished at this time. Restrictions or limitations due to this unaccomplished task are identified by an asterisk.(*)

* Description: Differential Linkage - Elevator System (Ref. ACA 8-500, 8-14623, 8-14626, 8-14647)

Remarks: Elevator controls considered too sensitive.

Limitation: None. Precise flying in certain regimes difficult.

* Description: Elevator Stick Forces. (Ref. ACA 8-700)

Remarks: Stick forces are approximately 50% too high. A spring of lower rate will be incorporated in the elevator feel cylinder to reduce take-off and landing forces. Also, the "Q" intelligence unit will be revised to lower the in-flight feel forces. .

Limitation: None. More pilot effort to perform maneuvers.

* Description: Trim Servo System (Ref. ACA 8-740)

8-15101
8-12364
8-14543
8-15383
8-15124
8-14496

Remarks: Without a trim servo system, a stable stick force gradient is not available and no pitch trim compensation is provided when speed brakes are operated.

4. PART B((Cont.)

Limitation: None. Airplane difficult to fly on manual or direct manual mode.

* Description: Pilot Assist System
(Ref. ACA 8-523
8-724
8-734
8-735
8-754
8-757
8-760
8-762
8-764
8-768
8-777
8-810
8-834
8-886
8-884
8-10933
8-11864
8-14629
8-14196
8-14384NF
8-14576
8-14579
8-14704
8-14296
8-14886NF
8-14887NF
8-14828
8-15071NF
8-15057
8-15155
8-15167
8-15175
8-15079
8-15616
8-15324
8-15087
8-15092
8-15212
8-15581
8-15103
8-15129
8-15400
8-15510
(And a Pitch "G" Limiting Device)

Remarks: At present, there is no pilot assist system installed and will not be until above ACA's are incorporated.

Limitation: Fully automatic control not available.

Description: Roll maneuver limitations. (Ref. ACA 8-754 and 8-884)

Limitation: The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
   a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight).

4. PART B (Cont.)

b. Do not exceed 80° per second for 360° rolls.

c. Uncoordinated maneuvers are prohibited.

2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.

Description: Pitch and Yaw Damper System
(Ref. ACA 8-768 8-11864
8-764 8-834
8-14828 8-15079
8-14629 8-14886NF
8-10933 8-15400

And Pitch "G" Limiting Device.

Remarks: Reliability and functions of the existing system is sub-marginal without incorporating the above ACA's. Until a satisfactory pitch "G" limiting system is developed, the following limitations listed below will still exist.

Limitation: Without a pitch "G" Limiter, pitch damper system shall not be used below 12,000 feet altitude at speeds above 480 knots.

*Description: Landing Gear Position and Warning Circuit.
(Ref. ECP 1020 and ACA 8-14475 8-15667
8-14383 8-15820

Remarks: Present landing gear warning system will operate at all altitudes. New system includes altitude and air speed switch and will operate warning system only when air speed is below 250 knots and altitude is less than 10,000 feet.

Limitation: None

*Description: Nose Wheel Well Curtains
(Ref. ACA 8-696)

Remarks: Existing curtains pulled loose at high landing speeds.

4. PART B (Cont.)

Limitation: None. Possible for snow, ice and debris to enter nose wheel well until adequate curtains are installed.

* Description: Radome Anti-Ice System
(Ref. ACA 8-13828)

Remarks: Present anti-ice distribution ring found inadequate in tests.

Limitation: Reduced radar capability during icing conditions.

* Description: Improved Fuel System
(Ref. ACA 8-708 8-15640 8-14943
8-795 8-15137 8-15176
8-14834 8-15537 8-15177
8-15062 8-14764 8-15846

Remarks: Provides fuel flow joiner in tank to engine fuel system to equalize the flow quantity-wise. This insures equal depletion from both sides and eliminates present necessity of pilot to maintain lateral balance with boost pump switch control. Also, provides twin boost pump installation to pick up fuel in all attitudes of flight, thus decreasing the amount of unusable fuel.

Limitation: Until accomplished, pilot must monitor fuel quantity to maintain equal distribution. Also, until twin boost pumps are installed, alternate dives and climbs and similar maneuvers with low fuel quantity is restricted as provided for in Handbooks.

Description: Relief Valve Install. - Mid Electronic Comp't. (Ref. ACA 8-716)

4. PART B (Cont.)

Remarks: This relief is installed to control internal fuselage pressure in the nose wheel well and forward electronic area.

Limitation: Do not operate aircraft above 50,000 feet with electronic equipment installed.

Note: Fire control will not be installed until final stages of the test program.

Description: Rain Clearing System. (Ref. ACA 8-15321, 8-954)

Remarks:

1. Valve is replaced by solid plug in duct valve, making rain clearing system inoperative. ACA 8-13469, 8-15321.
2. Hot air blast shield protects vinyl edge of windshield. ACA 8-954.

   Note: ACA 8-954 is not a Spec. Conformance item.

Limitation:

1. All weather operation should not be planned until valve VA 931-4 is installed. See Remark #1.
2. Rain clearing system should not be operated until ACA 8-954 is incorporated. See Remark #2.

Description: Anti-icing - Engine Duct Lips. (Ref. ACA 8-13569)

Remarks: Valve is replaced by solid plug in duct valve making anti-icing of engine duct lips inoperable.

4. PART B (Cont.)

Limitation: All weather operations should not be planned until valve VA 707-1 is installed.

Description: Thermal Venting Relief Valve - Installation of. (Ref. ACA 8-531, 8-13449)

Remarks: In case of pump flow control malfunctioning the hydraulic oil may heat up by working against the relief valve pressure. With this valve (VA 981-1) the relief valve will open at pre-determined oil temperature to protect the system.

Limitation: Land as soon as possible if primary or secondary system oil pressure indicator consistently shows above 3500 psi.

Description: Canopy Cinch-Down Actuating Mechanism - All Weather Protection
(Ref. ACA 8-14368 8-14482 8-14839
8-14682 8-14832
8-14889NF 8-14838NF

Remarks: With all-weather seal installed on canopy, air spring counter-balance is revised to provide a pull-down force sufficiently to compress the seal and latch the canopy.

Limitation: Parked A/C in rain must be protected against water leakage into cockpit.

Description: Armament Control System (Ref. ACA 8-574 & 8-572)

Remarks: Normal tactical configuration has been deleted by the above noted ACA's and their amendments to accommodate the Type MB-1 test configuration.

Limitation: None. The Type MB-1 configuration, in itself, does not impose additional flight limitations.

4. PART B (Cont.)

*Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15409, 8-16070)

Limitation: Until ACA 8-15409 and 8-16070 is accomplished, zero or negative "G" maneuvers shall be limited to three seconds; Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. power may occur.

*Description: Boundary Layer Bleed Duct - Manifolding (Ref. ACA 8-796)

Remarks: Vibration encountered at high speed when Ram Air Valve is closed. Correction is accomplished by manifolding left and right hand boundary layer bleed ducts together to provide continuous flow. ACA 8-14301 is an interim fix and has been accomplished.

Limitation: None. Incorporation of ACA 8-14301 precludes the possibility of vibration at speeds above 350 knots if ram air valve malfunctions or is intentionally closed during missile firing.

*Description: Electronic Equipment - Ground cooling of
(Ref. ACA 8-699 8-14628 8-15097
8-14606 8-14714 8-15178
8-14621 8-15083 8-14386
8-14643 8-14521

Remarks: Present system provides inadequate ground cooling unless connected to ground equipment.

Limitation: Electronic equipment should not be operated on the ground unless connected to ground cooling equipment. Note: After cooling equipment has been installed by the above ACA's, TVA #38104A will still deactivate the system until incorporation of ACA 8-1006. This ACA protects the ducts from high pressure and temperature if throttle is rapidly retarded.

4. PART B (Cont.)

Description: Electronic Equipment - Ground Cooling of Ref. ACA 8-16068

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until DU 197-3 is installed.

*Description: Air Conditioning - Ground Operation (Ref. ACA 8-689, 8-888)

Remarks: Insufficient air flow to cockpit when using ground air conditioning equipment or during taxi. Also, ACA 8-888 provides for quarter open canopy for cockpit comfort during ground maneuvers.

Limitation: None. Uncomfortable cockpit during extended operation on the ground during extreme ambient conditions.

Description: Windshield Anti-ice Circuit - Add transformers, revise wire gauges and circuits, etc. (Ref. ACA 8-653, 8-15496)

Part No: CVAC TRA 294

Quantity: Two

Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the windshield free of ice.

Limitation: The airplane should not be flown in icing conditions until the above ACA's have been incorporated. Also, de-fog may not be provided under extreme conditions.

Description: ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.

Part No: MS 20010-34 (8 pieces per airplane)

4. PART B (Cont.)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.

Limitation: a. Symmetrical Maneuvers -

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers

1. Do not exceed normal load factor of 3.9 g maximum.
2. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight)
3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

Description: Buzz Fix - High Speed
Ref. ACA 8-813

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

Description: Trim Servo - Operation of

Remarks: Low level operation with trim servo which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components if obtained.

4. PART B (Cont.)

Limitation: After trim servo is installed per ACA 8-740, do not engage trim servo at altitudes less than 5000 feet above the terrain.

Limitations on this airplane due to instrumentation requirements are as follows:

Description: Pilots Instrument Panel - Deletion of (Ref. TVA IN 42108 on dwg. 8-0043)

Remarks: Production pilots instrument panel deleted by above TVA to permit installation of 8-07779 basic pilots instrumentation instrument panel.

Limitation: No instrument panel lighting.

Description: Marker beacon antenna - deletion of (Ref. TVA IN 44081 on dwg 8-36681)

Remarks: Marker Beacon Antenna (8-36198) removed to provide space for 256/ARC Antenna. (To receive range time signal)

Limitation: No marker beacon antenna.

4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263c, Part II.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 14 February 1956.

REPORT NO. ZD-8-035

PART II

WAIVERS FOR AIRPLANE
SERIAL NO. 53-1807

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 53-1807.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMS but which have not been approved as of 14 February 1956, are as follows:

ECP NO. (CAC-F-102-)	Title
$233r_1$	Finish Requirements - Change of:
$1011r_1$	MG-3 Changes Group II (Proto type)
1024	Cockpit Ground Air Conditioning - Change of:
1037	2" Rockets - Installation of:
1068	P & W P-23 Engine Changes (Group III)
1099	Engine, Change to P-23: (4 A/C).

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 29 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Schedules Date
ZS-8-054	Armament Loads	3-15-56

EXHIBIT "A": Paragraph (g)
Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbook to be replaced with regular Flight Handbook in March 1956.

3. Equipment listed in the "Equipment Approval Status Record," Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 14 February 1956.

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force Form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report.

Quantity	Description	Part No.
2	Transformer - Windshield Anti-Ice Instl. Dwg. 8-68210 *(EPD 2-27-56)	TRA 294
1	Intervalometer - Rocket Equip. Instl. Instl. Dwg. 8-67186 (EPD 3-31-56)	UN 66-2
1	Intervalometer - Missile Equip. Instl. Instal. Dwg. 8-67186 (EPD 3-31-56)	UN 120
1	Valve, Recirculating Oil Instl. 8-22947 G.F.A.E. Part No. 660599 (EPD 4-1-56)	8-22947-7
1	Window Canopy Glass Inst. 8-73815 Interim TVA 34453 Instl. 8-73815-3 & -4 in Lieu. (EPD 4-15-56)	8-73856-7 -8

4. PART B Shortages as listed in Air Force Form 263C, which affect the performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

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*Date shown for expected parts delivery (EPD) is availability date and does not constitute date of installation in the aircraft.

4. PART B (Cont.)

Description:	Pilot Assist - Operation of (Ref. TVA 46117 on 8-60755)
Part No:	1. Suitable Pitch "G" Limiter 2. Suitable sideslip feedback (Ref. ACA 8-884, and TVA 46116 & TVA 46118 on 8-60754)
Quantity:	One.
Limitation:	Qualitative flight testing of pilot assist must be completed by contractor and Item 2 must be accomplished prior to activation of Pilot Assist. Until Item 1 is installed, Pilot Assist will be operated only with the following Elevator Limit Switch settings: ±2.3° above 15,000 feet or below M=0.6 ±1.0° above M=0.6 at altitudes below 15,000 feet NOTE: Pilot Assist has been deactivated per TVA 46117 on 8-60755.
Description:	Roll Maneuver Limitations
Limitation:	The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
    - a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight.)
    - b. Do not exceed 80° per second for 360° rolls.
    - c. Uncoordinated maneuvers are prohibited.

4. PART B (Cont.)

Limitation: (Cont.) 2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.

Description: Pitch and Yaw Damper Operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a Pitch "G" Limiter, Pitch Damper System shall not be used below 12,000 feet altitude at speeds above 480 knots.

Description: Missile Intervalometer Installation (Ref. ECP 1034)

Part No: CVAC UN 120 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing missiles or opening doors in the Missile Mode.

Description: Rocket Intervalometer Installation (Ref. ACA 8-12781NF)

Part No: CVAC UN 66-2 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing rockets or opening doors in the rocket mode.

4. PART B (Cont.)

Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15410, 8-16070)

Part No: GFAE #660599

Quantity: One

Limitation: Until ACA 8-15410 and 8-16070 is accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A. C. Power may occur.

Description: Windshield Anti-Ice Circuit - Add transformers, revise wire gauges and circuits, etc., to increase wattage on NESA glass. (Ref. ACA 8-653 and 8-15496).

Part No: CVAC TRA 294

Quantity: Two

Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the windshield free of ice.

Limitation: The airplane should not be flown in icing conditions until ACA 8-653 and 8-15496 have been incorporated. Also, de-fog may not be provided under extreme conditions.

Description: Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against drawing 8-60674 de-activates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

4. PART B (Cont.)

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

Description: Rain Clearing System (Ref. ACA 8-954)

Remarks: Hot air blast shield protects vinyl edge of windshield.

Limitation: Rain clearing system should not be used until ACA 8-954 has been incorporated.

Description: ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.

Part No: MS 20010-34 (8 pieces per airplane)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.

Limitation: a. Symmetrical Maneuvers -

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers -

1. Do not exceed normal load factor of 3.9g maximum.
2. No roll rate restrictions for positive quadrant rolls (90° either side of level flight.)
3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

4. PART B (Cont.)

Description: Buzz Fix - High Speed (Ref. ACA 8-813)

Remarks: Without a 20 inch inlet duct ramp extension, boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

Description: Trim Servo - Operation of

Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.

Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.

Limitations on A/C 53-1807 due to instrumentation requirements, are as follows:

Description: AIC-10 interphone control circuit - rewire of (Ref. TVA IN 31896)

Remarks: Makes provision for pilot to record comments on voice recorder without using radio transmitter.

Limitation: Stock switch only actuates voice recorder through interphone. Throttle switch actuates radio transmitter. (Note: This limitation is optional at pilot's request.)

Description: R541/ARN-14D Receiver and DY-84/ARN-14A Dynamotor - removal of (Ref. TVA IN 40793)

Remarks: Space needed for installation of special time correlation receiving equipment as requested of AFAC.

Limitation: VHF Navigational System inoperative (Note: An AN/ARA-25 UHF Direction Finder is installed to provide a navigational facility.)

4. PART B (Cont.)

Description: AN/ARN-12 Receiver and Mounting - removal of (Ref. TVA IN40796)

Remarks: Space needed for installation of AN/ANH-2 Voice Recorder.

Limitation: Marker Beacon Receiving System inoperative.

Description: Pilot's Instrument Panel - Special (Ref. TVA IN37486)

Remarks: Required to photograph desired flight parameters with cockpit camera.

Limitation:
1. ID 387/ARN Course indicator removed.
2. Clock removed.
3. Accelerometer installed.
4. Alternator Frequency Meter installed.
5. Bleed Valve indicator installed.

Description: TVA IN 40799 - remove forward center armament launcher.

Remarks: Space provided for instrumentation system platforms and equipment.

Limitation: No armament launcher in forward center bay.
NOTE: The remainder of the armament system operable.

Description: TVA IN 42658 removes ARN-18 equipment.

Remarks: Space needed for installation of land-air equipment.

Limitation: Navigational system inoperative.
NOTE: AN/ARN-25 UHF Direction Finder is installed to provide a navigational facility.

4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263C, Part II.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 14 February 1956.

REPORT NO. ZD-8-035

PART III

WAIVERS FOR AIRPLANE
SERIAL NO. 53-1811

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 53-1811.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 14 February 1956

ECP No. (CAC-F-102-)	Title
$233r_1$	Finish Requirements - Change of:
$1011r_1$	MG-5 Changes - Group II (Proto-Type)
1024	Cockpit Ground Air Conditioning - Change of:
1037	2" Rockets - Installation of:
1068	Pratt & Whitney P-23 Engine Changes - Group III

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 29 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	3-15-56

EXHIBIT "A": Paragraph (g)
Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbook to be replaced with regular Flight Handbook in March 1956.

3. Equipment listed in the "Equipment Approval Status Record", Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of: 14 February 1956.

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force Form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report.

Quantity	Description	Part No.
1	Valve Recirculating Oil Inst. 8-22947 G.F.A.E. Part No. 660599 (EPD 4-1-56)	8-22947-7
1	Nadar Recorder Instl. 8-30010 GFAE No. (EPD 4-15-56)	423049-100 H.A.C. P/N
2	Transformer - Windshield Anti-Ice Install 8-68210 *(EPD 2-27-56)	TRA 294

4. PART B Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

Description: Pilot Assist - Operation of (Ref. TVA 46117 on 8-60755)

Part No:
1. Suitable Pitch "G" Limiter
2. Suitable sideslip feedback (Ref. ACA 8-884, and TVA 46116 & TVA 46118 on 8-60754)

Quantity: One

Limitation: Qualitative flight testing of pilot assist must be completed by contractor and Item 2 must be accomplished prior to activation of pilot assist. Until Item 1 is installed, Pilot Assist will be operated only with the following Elevator Limit Switch settings: ± 2.3° above 15,000 feet or below M=0.6; ± 1.0° above m=0.6 at altitudes below 15,000 feet.

Note: Pilot Assist has been deactivated per TVA 46117 on 8-60755)

*Date shown for expected parts delivery (EPD) is availability date and does not constitute date of installation in the aircraft.

4. PART B (Cont)

Description: Roll Maneuver Limitations

Limitation: The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
    a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight)
    b. Do not exceed 80° per second for 360° rolls.
    c. Uncoordinated maneuvers are prohibited.
2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.

Description: Pitch and Yaw Damper Operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a Pitch "G" Limiter, Pitch Damper System shall not be used below 12,000 feet altitude at speeds above 480 knots.

Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15401)

Part No: GFAE #660599

Quantity: One each

Limitation: Until ACA 8-15401 is accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of AC power may occur.

4 PART B (Cont)

Description: Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against drawing 8-60674 deactivates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated).

Description: Windshield Anti-Ice Circuit - Add transformers, revise wire gauges, and circuits etc., to increase wattage on Nesa glass (Ref. ACA 8-653 and 8-15496)

Part No: CVAC TRA 294

Quantity: Two

Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the windshield free of ice.

Limitation: The airplane should not be flown in icing conditions until ACA 8-653 and 8-15496 have been incorporated. Also, defog may not be provided under extreme conditions.

Description: Trim Servo - Operation of

Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.

Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.

4. PART B (Cont.)

Description: ACA 8-14914. Wing attach bolts Spar Six-Interim use of MS type.

Part No: MS 20010-34 (8 pieces per airplane)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.

Limitation: a. Symmetrical Maneuvers -

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers -

1. Do not exceed normal load factor of 3.9g maximum.
2. No roll rate restrictions for positive quadrant rolls (90° either side of level flight).
3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

Description: Buzz Fix - High Speed (Ref. ACA 8-813)

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263C, Part II.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 14 February 1956.

REPORT NO. ZD-8-035

PART IV

WAIVERS FOR AIRPLANE
SERIAL NO. 53-1812

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 53-1812.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 19 February 1956, are as follows:

ECP No. (CAC-F-102-)	Title
$233r_1$	Finish Requirements - Change of:
1010	Main Landing Gear Skewed Axis - Change to:
$1011r_1$	MG-3 Group II (Proto-type) changes:
1024	Cockpit Ground Air Conditioning - Change of:
1037	2" Rockets - Installation of:
1068	Pratt & Whitney P-23 Engine Changes - Group III

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 29 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	3-15-56

Exhibit "A": Paragraph (g)
Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbook to be replaced with regular Flight Handbook in March 1956.

3. Equipment listed in the "Equipment Approval Status Record," Report No. ZM-8-091, dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 14 February 1956.

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force Form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report.

Quantity	Description	Part No.
1	Valve Recirculating Oil Instl. 8-22947 G.F.A.E. Part No. 660599 (EPD 4-1-56)	8-22947-7
2	Transformer - Windshield Anti-Ice Instl. 8-68210 * (EPD 2-27-56)	TRA 294
1 Ea	Window Canopy Glass Instl. 8-73815 Interim TVA 334453 Installs 8-73815-3 &-4 (EPD 4-15-56)	8-73815-7
1	Nadar Recorder G.F.A.E. # Instl. 8-30010 (EPD 4-15-56)	4-23049-100 H.A.C. P/N

4. PART B Shortages as listed in Air Force Form 263C, which affect the performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

Description: Pilot Assist - Operation of (Ref. TVA 46117 on 8-60755)

Part NO:
1. Suitable Pitch "G" Limiter
2. Suitable sideslip feedback (Ref. ACA 8-884, and TVA 46116 and TVA 46118 on 8-60754)

Quantity: One each

Limitation: Qualitative flight testing of pilot assist must be completed by contractor and Item 2 must be accomplished prior to activation of pilot assist. Until Item 1 is installed, Pilot Assist will be operated only with the following Elevator Limit Switch settings:
± 2.3° above 15,000 feet or below M=0.6;
± 1.0° above M=0.6 at altitudes below 15,000 feet.

*Date shown for expected parts delivery (EPD) is availability date and does not constitute date of installation in the aircraft.

4. PART B (Cont)

Note: Pilot Assist has been deactivated per TVA 46117 on 8-60755.

Description:	Roll Maneuver Limitations
Limitation:	The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
    a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight).
    b. Do not exceed 80° per second for 360° rolls.
    c. Uncoordinated maneuvers are prohibited.
2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.

Description:	Pitch and Yaw Damper Operation
Part No:	Suitable Pitch "G" Limiter
Quantity:	One
Limitation:	Without a Pitch "G" Limiter, Pitch Damper System shall not be used below 12,000 feet altitude at speeds above 480 knots.
Description:	Constant Speed Drive - Oil System for (Ref. ACA 8-15410, 8-16070)
Part No:	GFAE #660599
Quantity:	One

4. PART B (Cont)

Limitation: Until ACA 8-15410 and 8-16070 is accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. Power may occur.

Description: Windshield Anti-Ice Circuit - Add transformers, revise wire gauges and circuits, etc., to increase wattage on NESA glass. (Ref. ACA 8-653 and 8-15496.)

Part No. CVAC TRA 294

Quantity: Two

Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the widnshield free of ice.

Limitations: The airplane should not be flown in icing conditions until ACA 8-653 and 8-15496 have been incorporated. Also, de-fog may not be provided under extreme conditions.

Description: Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against drawing 8-60674 deactivates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

Description: ACA 8-14914. Wing attach bolts Spar Six-Interim use of MS type.

Part No.: MS 20010-34 (8 pieces per airplane)

4. PART B (Cont)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.

Limitation: a. Symmetrical Maneuvers -

Do not exceed normal load factor of 5.5g maximum

b. Asymmetrical Maneuvers -

1. Do not exceed normal load factor of 3.9g maximum.
2. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight.)
3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

Description: Buzz Fix - High Speed (Ref. ACA 8-813)

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach Number of 1.25.

Description: Trim Servo - Operation of

Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.

Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.

4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263C, Part II.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 14 February 1956.

ANALYSIS
PREPARED BY
CHECKED BY
REVISED BY "A"

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

A/C Ser. No. 53.1817
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MODEL F-102A
DATE 1 Feb 56

REPORT NO. ZD-8-035

PART V

WAIVERS FOR AIRPLANE

SERIAL NO. 53-1817

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 53-1817.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 14 February 1956, are as follows:

ECP No. (CAC-F-102-)	Title
233r$_1$	Finish Requirements - Change of:
1010r$_1$	Landing Gear Skewed Axis - Change to:
1011r$_1$	MG-3 Changes - Group II (Proto)
1068	Pratt & Whitney P-23 Engine Changes Group III
1086	Structure Overheat Warning Switch - Deletion of:

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 29 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	4-15-56

EXHIBIT "A": Paragraph (g)
Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbook to be replaced with regular Flight Handbook in March 1956.

3. Equipment listed in the "Equipment Approval Status Record", Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 14 February 1956.

4. PART A

The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report.

Quantity	Description	Part No.
2	Transformer - Windshield Anti-Ice Install Dwg. 8-68210 * (EPD 2-27-56)	TRA 294
1	Intervalometer - Rocket Equip. Inst. Install 8-67186 (EPD 3-2-56)	UN 66-2
1	Valve Recirculating Oil Install 8-22947 G.F.A.E. Part No. 660599 (EPD 4-30-56)	8-22947-7
1	Nadar Recorder Instl. 8-30010 G.F.A.E (EPD 4-15-56)	423049-100 H.A.C. P/N
1	Data Link Antenna Instl. Dwg. 8-36201 *(EPD 2-27-56)	ANT-67
1	Gear Box & Starter Comb. Install 8-22802 (EPD to be determined - G.F.A.E.)	AERNO 42-8750

4. PART B

Shortages as listed in Air Force Form 263C, which affect the performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment of intended usage.

Description: Pilot Assist - Operation of (Ref. TVA 46117 on 8-60755)

Part No:
1. Suitable Pitch "G" Limiter
2. Suitable sideslip feedback (Ref. ACA 8-884, and TVA 46116 & TVA 46118 on 8-60754)

*Date shown for expected parts delivery (EPD) is availabllity date and does not constitute date of installation in the aircraft.

4. PART B (Cont.)

Quantity: One

Limitation: Qualitative flight testing of pilot assist must be completed by contractor and Item 2 must be accomplished prior to activation of pilot assist. Until Item 1 is installed, Pilot Assist will be operated only with the following Elevator Limit Switch settings:

±2.3° above 15,000 feet or below M=0.6; ±1.0° above M=0.6 at altitudes below 15,000 feet.

Note: Pilot Assist has been deactivated per TVA 46117 on 8-60755.

Description: Roll Maneuver Limitations

Limitation: The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
    a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight)
    b. Do not exceed 80° per second for 360° rolls.
    c. Uncoordinated maneuvers are prohibited.
2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction:

    0 to 3.75g.

4. PART B (Cont.)

Description: Pitch and Yaw Damper Operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a Pitch "G" Limiter, Pitch Damper System shall not be used below 12,000 feet altitude at speeds above 480 knots.

Description: Missile Intervalometer Installation (Ref. ECP 1034)

Part No: CVAC UN 120 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing missiles or opening doors in the missile mode.

Description: Rocket Intervalometer Installation (Ref. ACA 8-12781 NF)

Part No: CVAC UN 66-2 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing rockets or opening doors in the rocket mode.

Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15410, 8-16070)

Part No: GFAE #660599

Quantity: One

Limitation: Until ACA 8-15410 and 8-16070 is accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C Power may occur.

4. PART B (Cont.)

Description: Windshield Anti-Ice Circuit - Add transformers, revise wire gauges and circuits, etc., to increase wattage on NESA glass. (Ref. ACA 8-653 and 8-15496).

Part No: CVAC TRA 294

Quantity: Two

Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the windshield free of ice.

Limitation: The airplane should not be flown in icing conditions until ACA 8-653 and 8-15496 have been incorporated. Also, defog may not be provided under extreme conditions.

Description: Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against drawing 8-60674 deactivates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

Description: ACA 8-14914. Wing attach bolts Spar Six-Interim use of MS type.

Part No: MS 20010-34 (8 pieces per airplane)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.

4. PART B (Cont.)

Limitation: a. Symmetrical Maneuvers -

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers

1. Do not exceed normal load factor of 3.9g maximum.
2. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight.)
3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

Description: Buzz Fix - High Speed
(Ref. ACA 8-813)

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

Description: Trim Servo - Operation of

Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.

Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.

4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263C, Part II.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 14 February 1956.

ANALYSIS
PREPARED BY
CHECKED BY
REVISED BY "A"

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

A/C Ser. No. 53-1818
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MODEL F-102A
DATE 1 Feb 56

REPORT NO. ZD-8-035

PART VI

WAIVERS FOR AIRPLANE
SERIAL NO. 53-1818

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 53-1818.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 14 February 1956, are as follows:

ECP NO. (CAC-F-102-)	Title
$233r_1$	Finish Requirements - Change of:
$1010r_1$	Landing Gear Skewed Axis - Change to:
$1011r_1$	MG-3 Changes - Group II (Proto)
1068	Pratt & Whitney P-23 Engine Changes (Group III
1086	Structure Overheat Warning Switch - Deletion of:
1099	Engine, Change to P-23: (4 A/C)

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 20 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	4-15-56

2. (Cont.)

EXHIBIT "A": Paragraph (g)
Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbook to be replaced with regular Flight Handbook in March 1956.

3. Equipment listed in the "Equipment Approval Status Recrod," Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 14 February 1956.

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report.

Quantity	Description	Part No.
2	Transformer - Windshield Anti-Ice Install Dwg. 8-68210 (EPD 2-29-56)	TRA 294
1	Intervalometer - Missile Equip. Inst. Install 8-67186 (EPD 3-2-56)	UN 120
1	Intervalometer - Rocket Equip. Inst. Install 8-67186 (EPD 3-2-56)	UN 66-2
1	Valve Recirculating Oil Install 8-22947 G.F.A.E. Part No. 660599 (EPD 4-30-56)	8-22947-7
1	Nadar Recorder Instl. Dwg. 8-30010 G.F.A.E. No. (EPD 4-15-56)	423049-100 H.A.C. P/N
1	Data Link Antenna Instl. Dwg. 8-36207 * (EPD 2-27-56)	ANT-67

* Date shown for expected parts delivery (EPD) is abailability date and does not constitute date of installation in the aircraft.

4. PART B Shortages as listed in Air Force Form 263C, which affect the performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

Description: Pilot Assist - Operation of (Ref. TVA 46117 on 8-60755)

Part No:

1. Suitable Pitch "G" Limiter
2. Suitable sideslip feedback (Ref. ACA 8-884, and TVA 46116 and TVA 46118 on 8-60754)

Quantity: One

Limitation: Qualitative flight testing of pilot assist must be completed by contractor and Item 2 must be accomplished prior to activation of pilot assist. Until Item 1 is installed, Pilot Assist will be operated only with the following Elevator Limit Switch settings:

±2.3° above 15,000 feet or below M=0.6; ±1.0° above M=0.6 at altitudes below 15,000 feet.

Note: Pilot Assist has been deactivated per TVA 46117 on 8-60755.

Description: Roll Maneuver Limitations

Limitation: The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
    a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight)
    b. Do not exceed 80° per second for 360° rolls.
    c. Uncoordinated maneuvers are prohibited.

4. PART B (Cont.)

Limitation:	(Cont.) 2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.
Description:	Pitch and Yaw Damper Operation
Part No:	Suitable Pitch "G" Limiter
Quantity:	One
Limitation:	Without a Pitch "G" limiter, pitch damper system shall not be used below 12,000 feet altitude at speeds above 480 knots.
Desctiption:	Missile Intervalometer Installation (Ref. ECP 1034)
Part No:	CVAC UN 120 Intervalometer
Quantity:	One
Limitation:	Must be installed prior to firing missiles or opening doors in the missile mode.
Description:	Rocket Intervalometer Installation (Ref. ACA 8-12781 NF)
Part No:	CVAC UN 66-2 Intervalometer
Quantity:	One
Limitation:	Must be installed prior to firing rockets or opening doors in the rocket mode.

4. PART B (Cont.)

Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15403, 8-15709, 8-16070)

Part No: GFAE #660599

Quantity: One

Limitation: Until the above ACA's are accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. power may occur.

Description: Windshield Anti-Ice Circuit - Add transformers, revise wire gauges and circuits, etc., to increase wattage on NESA glass (Ref. ACA 8-653 and 8-15496).

Part No: CVAC TRA 294

Quantity: Two

Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the windshield free of ice.

Limitation: The airplane should not be flown in icing conditions until ACA 8-653 and 8-15496 have been incorporated. Also, de-fog may not be provided under extreme conditions.

Description: Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against drawing 8-60674 de-activates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.

4. PART B (Cont.)

Limitation:	No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.
Description:	ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.
Part No:	MS 20010-34 (8 pieces per airplane)
Remarks:	Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.

Limitation:

a. Symmetrical Maneuvers -

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers -

1. Do not exceed normal load factor of 3.9g.
2. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight.)
3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

Description:	Buzz Fix - High Speed (Ref. ACA 8-813)
Remarks:	Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

4. PART B (Cont.)

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

Description: Trim Servo - Operation of

Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.

Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.

Limitations on 8-10 #28 (53-1818) due to instrumentation requirements are as follows:

Description: TVA IN31896 required AIC-10 interphone control circuit.

Remarks: Make provisions for pilot to record comments on voice recorder without using radio transmitter.

Limitation: Stock switch only actuates voice recorder through interphone. Throttle switch actuates radio transmitter.

Note: This limitation is optional at pilot's request.

Description: TVA IN40793 removes R541/ARN-14D Receiver and DY-84/ARN-14A Dynamotor.

Remarks: Space needed for installation of special time coorelation receiving equipment as requested by AFAC.

Limitation: VHF Navigational System inoperative

Note: An AN/ARA-25 UHF Directions Finder is installed to provide a navigational facility.

4. PART B (Cont.)

Description: TVA IN40796 removes the AN/ARN-12 Receiver and Mounting.

Remarks: Space needed for installation of AN/ANH-2 Voice Recorder.

Limitation: Marker Beacon Receiving System inoperative.

Description: TVA IN37486 replaces the standard pilots instrument panel with a special instrument panel and instruments.

Remarks: Required to photograph desired flight parameters with cockpit camera.

Limitation:

1. ID 387/ARN Course Indicator removed.
2. Clock removed.
3. Accelerometer installed.
4. Alternator Frequency Meter Installed.

Description: TVA IN 40800 and IN 42894 removes aft center armament launcher.

Remarks: Space provisions for instrumentation platform and equipment.

Limitation: No armament in aft center missile bay (remainder of launchers are operable).

Description: TVA IN 42658 removes ARN-18.

Remarks: Space needed for installation of land-air equipment.

Limitation: Navigational system inoperative (AN/ARA-25 UHF directional finder is installed to provide a navigational facility).

4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263C, Part II.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 14 February 1956.

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-035
DATE 29 Feb 1956
MODEL F-102A

TITLE

REPORT NO. ZD-8-035
DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANE AF S/N 53-1806, 1807, 1811, 1812, 1817 & 1818
CONTRACT AF33(600)-5942

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PARTS VI
~~NO. OF PAGES~~

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
"A"	2-14-56	WMG	Parts V & VI Replace Parts Of The	Noted
			Same Number Involving Different	
			Airplanes.	
			Misc. Corrections Throughout	

FORM 1812A-4

This report is prepared to define the condition of these airplanes as of factory completion for acceptance by the Air Force.

WAIVERS FOR THE FOLLOWING AIRPLANES ARE CONTAINED IN THEIR RESPECTIVE PARTS AS NOTED:

A/C SER. NO.	PART
53-1806	PART I
53-1807	PART II
53-1811	PART III
53-1812	PART IV
53-1817	PART V
53-1818	PART VI

REPORT NO. ZD-8-035

PART I

WAIVERS FOR AIRPLANE
SERIAL NO. 53-1806

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 53-1806.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 10 January 1956, are as follows:

ECP No. (CAC-F-102-)	Title
$233r_1$	Finish Requirements - Change of:
1020	Landing Gear Warning System - Positive Warning
1022	Elevator - Change from 10° to 8° Down Surface Travel
1024	Cockpit Ground Air Conditioning - Change of:
1036	Exhaust Nozzle Vent Line - Installation of:
1042	Altimeter Calibration Card Holder on F/TF102A A/C - Installation of:
1049	Servicing Connection, Clearance on Hi Pressure Air and Ground Pneumatic Starter
1054	Ground Interphone - Shielded Wire from Pin "F" Addition of:
1057	Oxygen System - Change to Liquid Supply
1064	Amphenol 82-312 Plug Replaced by UG-21-C/U Plug
1065	Oxygen Cylinder Bottle - Addition of:
1073	Lap Belt - Change of:
1082	Oil Tank Scupper Installation - Rev. of:
1087	Constant Speed Drive Oil System - Rev. of:

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 29 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

2. (Cont.)

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	3-15-56

EXHIBIT "A": Paragraph (g)
Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbook to be replaced with regular Flight Handbook in March 1956.

3. Equipment listed in the "Equipment Approval Status Record," Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 1 February 1956.

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force form 263, Part II. Some of the following shortage items impose certain limitations on this airplane; these limitations are defined in 4 PART B of this report.

Quantity	Description	Part No.
1	Intervalometer - Missile Equip. Instl. Instl. Dwg. 8-67186 (EPD 3-31-56)	UN 120
1	Duct Inst. Int. Anti-ice Valve Instl. 8-87048 (EPD 1-12-56)	VA 1072
2	Tank & Pylon Inst. External Fuel Inst. Ref. 8-17007 (To be accomp. during Flt. Test Prog.)	8-17005-1
1 Ea.	Pedal & Rudder Brake Inst. Inst. 8-49240 (EPD 2-27-56)	8-49936-3 8-49660-3 8-49663-3 8-49663-4
1	Valve, Recirculating Oil Instl. 8-22947 G.F.A.E. Part No. 660599 (EPD 4-1-56)	8-22947-7

4. PART A (Cont.)

Quantity	Description	Part No.
2	Transformer - Windshield Anti-ice Instl. Dwg. 8-68210 (EPD 1-23-56)	TRA 294
1	Intervalometer - Rocket Equip. Instl. Instl. Dwg. 8-67186 (EPD 3-31-56)	UN 66-2
1 Ea.	Window Canopy Glass Instl. 8-73815 Interim TVA 34453 Instl. 8-73815-3 & -4 in Liew. (EPD 2-10-56)	8-73856-7 -8

4. PART B Shortages as listed in Air Force Form 263c, which affects the performance or mission of the airplane as noted, performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

NOTE: Since this airplane is scheduled for conditional acceptance and subsequent flight testing of the Type MB-1 Rocket configuration under an accelerated program by the Contractor, the Specification Conformance Changes (Report ZM-8-162) have not been accomplished at this time. Restrictions or limitations due to this unaccomplished task are identified by an asterisk.(*)

* Description: Differential Linkage - Elevator System (Ref. ACA 8-500, 8-14623, 8-14626, 8-14647)

Remarks: Elevator controls considered too sensitive.

Limitation: None. Precise flying in certain regimes difficult.

* Description: Elevator Stick Forces. (Ref. ACA 8-700)

Remarks: Stick forces are approximately 50% too high. A spring of lower rate will be incorporated in the elevator feel cylinder to reduce take-off and landing forces. Also, the "Q" intelligence unit will be revised to lower the in-flight feel forces.

4. PART B (Cont.)

Limitation: None. More pilot effort to perform maneuvers.

* Description: Trim Servo System (Ref. ACA 8-740)

8-15101
8-12364
8-14543
8-15383
8-15124
8-14496

Remarks: Without a trim servo system, a stable stick force gradient is not available and no pitch trim compensation is provided when speed brakes are operated.

Limitation: None. Airplane difficult to fly on manual or direct manual mode.

* Description: Pilot Assist System
(Ref. ACA 8-523
8-724
8-734
8-735
8-754
8-757
8-760
8-762
8-764
8-768
8-777
8-810
8-834
8-886
8-884
8-10933
8-11864
8-14629
8-14196
8-14384 NF
8-14576
8-14579
8-14704
8-14296
8-14886 NF
8-14887 NF
8-14828
8-15071 NF
8-15057
8-15155
8-15167
8-15175
8-15079
8-15616
8-15324
8-15087
8-15092
8-15212
8-15581
8-15103
8-15129
8-15400
8-15510
(And a Pitch "G" Limiting Device)

Remarks: At present, there is no pilot assist system installed and will not be until above ACA's are incorporated.

Limitation: Fully automatic control not available.

Description: Roll maneuver limitations.
(Ref. ACA 8-754 and 8-884)

Limitation: The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.

   a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight).

4. PART B (Cont.)

b. Do not exceed 80° per second for 360° rolls.
c. Uncoordinated maneuvers are prohibited.

2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.

Description: Pitch and Yaw Damper System
(Ref. ACA 8-768 8-11864
8-764 8-834
8-14828 8-15079
8-14629 8-14886 NF
8-10933 8-15400

And Pitch "G" Limiting Device.

Remarks: Reliability and functions of the existing system is sub-marginal without incorporating the above ACA's. Until a satisfactory pitch "G" limiting system is developed, the following limitations listed below will still exist.

Limitation: Without a pitch "G" Limiter, pitch damper system shall not be used below 12,000 feet altitude at speeds above 480 knots.

*Description: Landing Gear Position and Warning Circuit.
(Ref. ECP 1020 and ACA 8-14475 8-15667
8-14383 8-15820

Remarks: Present landing gear warning system will operate at all altitudes. New system includes altitude and air speed switch and will operate warning system only when air speed is below 250 knots and altitude is less than 10,000 feet.

Limitation: None

*Description: Nose Wheel Well Curtains
(Ref. ACA 8-696)

Remarks: Existing curtains pulled loose at high landing speeds.

Limitation: None. Possible for snow, ice and debris to enter nose wheel well until adequate curtains are installed.

4. PART B (Cont.)

* Description: Radome Anti-Ice System
(Ref. ACA 8-13828)

Remarks: Present anti-ice distribution ring found inadequate in tests.

Limitation: Reduced radar capability during icing conditions.

* Description: Improved Fuel System
(Ref. ACA 8-708 8-15640 8-14943
8-795 8-15137 8-15176
8-14834 8-15537 8-15177
8-15062 8-14764 8-15846

Remarks: Provides fuel flow joiner in tank to engine fuel system to equalize the flow quantity-wise. This insures equal depletion from both sides and eliminates present necessity of pilot to maintain lateral balance with boost pump switch control. Also, provides twin boost pump installation to pick up fuel in all attitudes of flight, thus decreasing the amount of unusable fuel.

Limitation: Until accomplished, pilot must monitor fuel quantity to maintain equal distribution. Also, until twin boost pumps are installed, alternate dives and climbs and similar maneuvers with low fuel quantity is restricted as provided for in Handbooks.

Description: Relief Valve Install. - Mid Electronic Comp't. (Ref. ACA 8-716)

Remarks: This relief is installed to control internal fuselage pressure in the nose wheel well and forward electronic area.

Limitation: Do not operate aircraft above 50,000 feet with electronic equipment installed. Note: Fire control will not be installed until final stages of the test program.

Description: Rain Clearing System. (Ref. ACA 8-15321, 8-954)

Remarks:

1. Valve is replaced by solid plug in duct valve, making rain clearing system inoperative. ACA 8-13469, 8-15321.
2. Hot air blast shield protects vinyl edge of windshield. ACA 8-954.

Note: ACA 8-954 is not a Spec. Conformance item.

4. PART B (Cont.)

Limitation: 1. All weather operation should not be planned until valve VA 931-4 is installed. See Remark #1.

2. Rain clearing system should not be operated until ACA 8-954 is incorporated. See Remark #2.

Description: Anti-icing - Engine Duct Lips. (Ref. ACA 8-13569)

Remarks: Valve is replaced by solid plug in duct valve making anti-icing of engine duct lips inoperable.

Limitation: All weather operations should not be planned until valve VA 707-1 is installed.

Description: Thermal Venting Relief Valve - Installation of. (Ref. ACA 8-531, 8-13449)

Remarks: In case of pump flow control malfunctioning the hydraulic oil may heat up by working against the relief valve pressure. With this valve (VA 981-1) the relief valve will open at pre-determined oil temperature to protect the system.

Limitation: Land as soon as possible if primary or secondary system oil pressure indicator consistently shows above 3500 psi.

Description: Canopy Cinch-Down Actuating Mechanism - All Weather Protection
(Ref. ACA 8-14368 8-14482 8-14839
8-14682 8-14832
8-14889 NF 8-14838 NF

Remarks: With all-weather seal installed on canopy, air spring counter-balance is revised to provide a pull-down force sufficiently to compress the seal and latch the canopy.

Limitation: Parked A/C in rain must be protected against water leakage into cockpit.

Description: Armament Control System (Ref. ACA 8-574 & 8-572)

Remarks: Normal tactical configuration has been deleted by the above noted ACA's and their amendments to accommodate the Ding Dong test configuration.

Limitation: None. The Ding Dong configuration, in itself, does not impose additional flight limitations.

4. PART B (Cont.)

*Description: Constant Speed Drive - Oil System for
(Ref. ACA 8-15409, 8-16070)

Limitation: Until ACA 8-15409 and 8-16070 is accomplished, zero or negative "G" maneuvers shall be limited to three seconds; Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. power may occur.

*Description: Boundary Layer Bleed Duct - Manifolding.
(Ref. ACA 8-796)

Remarks: Vibration encountered at high speed when Ram Air Valve is closed. Correction is accomplished by manifolding left and right hand boundary layer bleed ducts together to provide continuous flow. ACA 8-14301 is an interim fix and has been accomplished.

Limitation: None. Incorporation of ACA 8-14301 precludes the possibility of vibration at speeds above 350 knots if ram air valve malfunctions or is intentionally closed during missile firing.

*Description: Electronic Equipment - Ground Cooling of.
(Ref. ACA 8-699 8-14628 8-15097
8-14606 8-14714 8-15178
8-14621 8-15083 8-14386
8-14643 8-14521

Remarks: Present system provides inadequate ground cooling unless connected to ground equipment.

Limitation: Electronic equipment should not be operated on the ground unless connected to ground cooling equipment. Note: After cooling equipment has been installed by the above ACA's, TVA #38104A will still deactivate the system until incorporation of ACA 8-1006. This ACA protects the ducts from high pressure and temperature if throttle is rapidly retarded.

Description: Electronic Equipment - Ground Cooling of
Ref. ACA 8-16068

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until DU 197-3 is installed.

4. PART B (Cont.)

* Description: Air Conditioning - Ground Operation (Ref. ACA 8-689, 8-888)

Remarks: Insufficient air flow to cockpit when using ground air conditioning equipment or during taxi. Also, ACA 8-888 provides for quarter open canopy for cockpit comfort during ground maneuvers.

Limitation: None. Uncomfortable cockpit during extended operation on the ground during extreme ambient conditions.

Description: Windshield Anti-ice Circuit - Add transformers, revise wire gauges and circuits, etc. (Ref. ACA 8-653, 8-15496)

Part No: CVAC TRA 294

Quantity: Two

Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the windshield free of ice.

Limitation: The airplane should not be flown in icing conditions until the above ACA's have been incorporated. Also, de-fog may not be provided under extreme conditions.

Description: ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.

Part No: MS 20010-34 (8 pieces per airplane)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.

Limitation:

a. Symmetrical Maneuvers -

Do not exceed normal load factor of 5.5g. maximum.

b. Asymmetrical Maneuvers

1. Do not exceed normal load factor of 3.9 g maximum.
2. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight)

4. PART B (Cont.)

3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

Description: Buzz Fix - High Speed
Ref. ACA 8-813

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

Description: Trim Servo - Operation of

Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.

Limitation: After trim servo is installed per ACA 8-740, do not engage trim servo at altitudes less than 5000 feet above the terrain.

Limitations on this airplane due to instrumentation requirements are as follows:

Description: Pilots Instrument Panel - Deletion of
(Ref. TVA IN 42108 on dwg. 8-00043)

Remarks: Production pilots instrument panel deleted by above TVA to permit installation of 8-07779 basic pilots instrumentation instrument panel.

Limitation: No instrument panel lighting.

Description: Marker beacon antenna - deletion of
(Ref. TVA IN 44081 on dwg. 8-36681)

Remarks: Marker Beacon Antenna (8-36198) removed to provide space for 256/ARC Antenna. (To receive range time signal)

Limitation: No marker beacon antenna.

4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263c, Part II.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 20 December 1955.

6. List of items not proven to be interchangeable on this airplane at time of final acceptance on 29 February 1955:

Rudder Nose Door	8-15016-39
	-41
	-43
Wing Leading Edge Panel Assemblies	8-17230-27
	-28
	-29
	-30
	-31
	-32
	-33
	-34
	-35
	-36
Wing Leading Edge Assemblies	8-17232-1
	-2
	8-17233-1
	-2
	8-17234-1
	-2
	8-17235-1
	-2
	8-17236-1
	-2
Wing Tip Assembly	8-17900-9
	-10
Electronics Purge Valve Insp. Door	8-73433-79
Tail Cone Assembly	8-73490
Speed Brake Door Assembly	8-73614-3
	-4

REPORT NO. ZD-8-035

PART II

WAIVERS FOR AIRPLANE

SERIAL NO. 53-1807

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 53-1807.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 10 January 1956, are as follows:

ECP No. (CAC-F-102-)	Title
$233r_1$	Finish Requirements - Change of:
1020	Landing Gear Warning System - Positive Warning
1022	Elevator - Change from 10° to 8° Down Surface Travel
1024	Cockpit Ground Air Conditioning - Change of:
1036	Exhaust Nozzle Vent Line - Installation of:
1037	2" Rockets - Installation of:
1065	Oxygen Cylinder Bottle - Addition of:
1075	MM-2 Attitude Indicator - Interim Installation of:
1087	Constant Speed Drive Oil System - Rev. of:

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 29 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	3-15-56

EXHIBIT "A": Paragraph (g)
Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbook to be replaced with regular Flight Handbook in March 1956.

3. Equipment listed in the "Equipment Approval Status Record," Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 1 February 1956.

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force Form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report.

Quantity	Description		Part No.
2	Transformer - Windshield Anti-Ice Instl. Dwg. 8-68210 (EPD 1-23-56)		TRA 294
1	Intervalometer - Rocket Equip. Instl. Instl. Dwg. 8-67186 (EPD 3-31-56)		UN 66-2
1	Fuel Flow Joiner Instl. Dwg. 8-27401 Regulators 150-2 & 150-3 are alternate and interchangeable	EPD 4-2-56 EPD 1-20-56	REG 150-3 REG 150-2
1	Intervalometer - Missile Equip. Instl. Instal. Dwg. 8-67186 (EPD 3-31-56)		UN 120
1	Valve, Recirculating Oil Instl. 8-22947 G.F.A.E. Part No. 660599 (EPD 4-1-56)		8-22947-7
1	Window Canopy Glass Instl. 8-73815 Interim TVA 34453 Instl. 8-73815-3 & -4 in Lieu. (EPD 2-10-56)		8-73856-7 -8
1	Valve, Recirculating Oil Instl. 8-22947 G.F.A.E. Part No. 660599 (EPD 4-1-56)		8-22947-7

4. PART B — Shortages as listed in Air Force Form 263C, which affect the performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

Description: Pilot Assist - Operation of (Ref. TVA 46117 on 8-60755)

Part No:

1. Suitable Pitch "G" Limiter
2. Suitable sideslip feedback (Ref. ACA 8-884, and TVA 46116 & TVA 46118 on 8-60754)

Quantity: One.

Limitation: Qualitative flight testing of pilot assist must be completed by contractor and Item 2 must be accomplished prior to activation of Pilot Assist. Until Item 1 is installed, Pilot Assist will be operated only with the following Elevator Limit Switch settings:

±2.3° above 15,000 feet or below M=0.6

±1.0° above M=0.6 at altitudes below 15,000 feet

NOTE: Pilot Assist has been deactivated per TVA 46117 on 8-60755.

Description: Roll Maneuver Limitations

Limitation: The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
    - a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight.)
    - b. Do not exceed 80° per second for 360° rolls.
    - c. Uncoordinated maneuvers are prohibited.

4. PART B (Cont.)

Limitation: (Cont.) 2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.

Description: Pitch and Yaw Damper Operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a Pitch "G" Limiter, Pitch Damper System shall not be used below 12,000 feet altitude at speeds above 480 knots.

Description: Missile Intervalometer Installation (Ref. ECP 1034)

Part No: CVAC UN 120 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing missiles or opening doors in the Missile Mode.

Description: Rocket Intervalometer Installation (Ref. ACA 8-12781NF)

Part No: CVAC UN 66-2 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing rockets or opening doors in the rocket mode.

4. PART B (Cont.)

Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15410, 8-16070)

Part No: GFAE #660599

Quantity: One

Limitation: Until ACA 8-15410 and 8-16070 is accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A. C. Power may occur.

Description: Windshield Anti-Ice Circuit - Add transformers, revise wire gauges and circuits, etc., to increase wattage on NESA glass. (Ref. ACA 8-653 and 8-15496).

Part No: CVAC TRA 294

Quantity: Two

Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the windshield free of ice.

Limitation: The airplane should not be flown in icing conditions until ACA 8-653 and 8-15496 have been incorporated. Also, de-fog may not be provided under extreme conditions.

Description: Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against drawing 8-60674 de-activates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

4. PART B (Cont.)

Reason:	Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.
Limitation:	No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.
Description:	Rain Clearing System (Ref. ACA 8-954)
Remarks:	Hot air blast shield protects vinyl edge of windshield.
Limitation:	Rain clearing system should not be used until ACA 8-954 has been incorporated.
Description:	ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.
Part No:	MS 20010-34 (8 pieces per airplane)
Remarks:	Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.

Limitation:

a. Symmetrical Maneuvers -

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers -

1. Do not exceed normal load factor of 3.9g maximum.
2. No roll rate restrictions for positive quadrant rolls (90° either side of level flight.)
3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

4. PART B (Cont.)

Description: Buzz Fix - High Speed (Ref. ACA 8-813)

Remarks: Without a 20 inch inlet duct ramp extension, boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

Description: Trim Servo - Operation of

Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.

Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.

Limitations on A/C 53-1807 due to instrumentation requirements, are as follows:

Description: AIC-10 interphone control circuit - rewire of (Ref. TVA IN 31896)

Remarks: Makes provision for pilot to record comments on voice recorder without using radio transmitter.

Limitation: Stock switch only actuates voice recorder through interphone. Throttle switch actuates radio transmitter. (Note: This limitation is optional at pilot's request.)

Description: R541/ARN-14D Receiver and DY-84/ARN-14A Dynamotor - removal of (Ref. TVA IN 40793)

Remarks: Space needed for installation of special time correlation receiving equipment as requested of AFAC.

Limitation: VHF Navigational System inoperative (Note: An AN/ARA-25 UHF Direction Finder is installed to provide a navigational facility.)

4. PART B (Cont.)

Description: AN/ARN-12 Receiver and Mounting - removal of (Ref. TVA IN40796)

Remarks: Space needed for installation of AN/ANH-2 Voice Recorder.

Limitation: Marker Beacon Receiving System inoperative.

Description: Pilot's Instrument Panel - Special (Ref. TVA IN37486)

Remarks: Required to photograph desired flight parameters with cockpit camera.

Limitation:

1. ID 387/ARN Course indicator removed.
2. Clock removed.
3. Accelerometer installed.
4. Alternator Frequency Meter installed.
5. Bleed Valve indicator installed.

Description: TVA IN 40799 - remove forward center armament launcher.

Remarks: Space provided for instrumentation system platforms and equipment.

Limitation: No armament launcher in forward center bay. (Note: The remainder of the armament system operable.)

Description: TVA IN 42658 removes ARN-18 equipment.

Remarks: Space needed for installation of land-air equipment.

Limitation: Navigational system inoperative. (Note: AN/ARN-25 UHF Direction Finder is installed to provide a navigational facility).

4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263C, Part II.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 20 December 1955.

6. List of items not proven to be interchangeable on this airplane at time of final acceptance on 29 February 1956:

Rudder Nose Door	8-15016-39
	-41
	-43
Wing Leading Edge Panel Assemblies	8-17230-27
	-28
	-29
	-30
	-31
	-32
	-33
	-34
	-35
	-36
Wing Leading Edge Assemblies	8-17232-1
	-2
	8-17233-1
	-2
	8-17234-1
	-2
	8-17235-1
	-2
	8-17236-1
	-2
Wing Tip Assembly	8-17900-9
	-10
Electronics Purge Valve Insp. Door	8-73433-79
Tail Cone Assembly	8-73490
Speed Brake Door Assembly	8-73614-3
	-4

REPORT NO. ZD-8-035

PART III

WAIVERS FOR AIRPLANE
SERIAL NO. 53-1811

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 53-1811.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 10 January 1956, are as follows:

ECP No. (CAC-F-102-)	Title
233r$_1$	Finish Requirements - Change of:
1020	Landing Gear Warning System - Positive Warning
1022	Elevator - Change from 10° to 8° Down Surface Travel
1024	Cockpit Ground Air Conditioning - Change of:
1031	Pratt & Whitney P-23 Engine Changes - Group II
1037	2" Rockets - Installation of:
1041	MG-10 Changes - Group IV (Prod.)
1065	Oxygen Cylinder Bottle - Additions of:
1068	Pratt & Whitney P-23 Engine Changes - Group III
1075	MM-2 Attitude Indicator - Interim Installation of:
1079	MG-10 Changes - Group V (Prod.)
1087	Constant Speed Drive Oil System - Rev. of:

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 29 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	3-15-56

2. (Cont.)

EXHIBIT "A": Paragraph (g)
Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbook to be replaced with regular Flight Handbook in March 1956.

3. Equipment listed in the "Equipment Approval Status Record," Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of: 1 February 1956.

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force Form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report.

Quantity	Description		Part No.
1	Fuel Flow Joiner Instl. Dwg. 8-27401 Regulators 150-2 & 150-3 are alternate and interchangeable	(EPD 1-20-56) (EPD 4-2-56)	REG 150-2 REG 150-3
1	Valve Recirculating Oil Inst. 8-22947 G.F.A.E. Part No. 660599 (EPD 4-1-56)		8-22947-7
1	Nadar Recorder Instl. 8-30010 (EPD 3-15-56)		423049-100 H.A.C. P/N
1	Intervalometer - Rocket Equip. Install. Dwg 8-67186 (EPD 1-31-56)		UN 66-2
1	Intervalometer - Missile Equip. Inst. Install Dwg. 8-67186 (EPD 3-31-56)		UN 120
2	Transformer - Windshield Anti-Ice Install 8-68210 (EPD 1-23-56)		TRA 294

4. PART B

Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

Description: Pilot Assist - Operation of (Ref. TVA 46117 on 8-60755)

Part No:
1. Suitable Pitch "G" Limiter
2. Suitable sideslip feedback (Ref. ACA 8-884, and TVA 46116 & TVA 46118 on 8-60754)

Quantity: One

Limitation: Qualitative flight testing of pilot assist must be completed by contractor and Item 2 must be accomplished prior to activation of pilot assist. Until Item 1 is installed, Pilot Assist will be operated only with the following Elevator Limit Switch settings:
± 2.3° above 15,000 feet or below M=0.6;
± 1.0° above m=0.6 at altitudes below 15,000 feet.

Note: Pilot Assist has been deactivated per TVA 46117 on 8-60755)

Description: Roll Maneuver Limitations

Limitation: The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
    a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight)
    b. Do not exceed 80° per second for 360° rolls.
    c. Uncoordinated maneuvers are prohibited.

4. PART B (Cont)

2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.

Description:	Pitch and Yaw Damper Operation
Part No:	Suitable Pitch "G" Limiter
Quantity:	One
Limitation:	Without a Pitch "G" Limiter, Pitch Damper System shall not be used below 12,000 feet altitude at speeds above 480 knots.
Description:	Constant Speed Drive - Oil System for (Ref. ACA 8-15401)
Part No:	GFAE #660599
Quantity:	One each
Limitation:	Until ACA 8-15401 is accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of AC power may occur.
Description:	Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)
Remarks:	TVA 38104A against drawing 8-60674 deactivates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.
Reason:	Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.
Limitation:	No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

4. PART B (Cont.)

Description: Windshield Anti-Ice Circuit - Add transformers, revise wire gauges, and circuits etc., to increase wattage on Nesa glass (Ref. ACA 8-653 and 8-15496)

Part No: CVAC TRA 294

Quantity: Two

Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the windshield free of ice.

Limitation: The airplane should not be flown in icing conditions until ACA 8-653 and 8-15496 have been incorporated. Also, defog may not be provided under extreme conditions.

Description: Rocket Intervalometer Installation (Ref. ACA 8-12781 NF)

Part No: CVAC UN 66-2 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing rockets or opening doors in the Rocket Mode.

Description: Missile Intervalometer Installation (Ref. ECP 1034)

Part No: CVAC UN 120 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing missiles or opening doors in the missile mode.

Description: Trim Servo - Operation of

Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.

Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.

4. PART B (Cont.)

Description: Rain Clearing System (Ref. ACA 8-954)

Remarks: Hot air blast shield protects vinyl edge of windshield.

Limitation: Rain clearing system should not be used until ACA 8-954 has been incorporated.

Description: ACA 8-14914. Wing attach bolts Spar Six-Interim use of MS type.

Part No: MS 20010-34 (8 pieces per airplane)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.

Limitation:

a. Symmetrical Maneuvers -

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers -

1. Do not exceed normal load factor of 3.9g maximum.
2. No roll rate restrictions for positive quadrant rolls (90° either side of level flight).

4. PART B (Cont.)

Limitation: (Cont.)

b. Asymmetrical Maneuvers - (Cont.)

3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

Description: Buzz Fix - High Speed (Ref. ACA 8-813)

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263C, Part II.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 20 December 1955.

6. List of items not proven to be interchangeable on this airplane at time of final acceptance on 29 February 1956:

Rudder Nose Door	8-15016-39
	-41
	-43
Wing Leading Edge Panel Assemblies	8-17230-27
	-28
	-29
	-30
	-31
	-32
	-33
	-34
	-35
	-36
Wing Leading Edge Assemblies	8-17232-1
	-2
	8-17233-1
	-2
	8-17234-1
	-2
	8-17235-1
	-2
	8-17236-1
	-2
Wing Tip Assembly	8-17900-9
	-10
Electronics Purge Valve Insp. Door	8-73433-79
Tail Cone Assembly	8-73490
Speed Brake Door Assembly	8-73614-3
	-4

REPORT NO. ZD-8-035

PART IV

WAIVERS FOR AIRPLANE
SERIAL NO. 53-1812

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 53-1812.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 10 January 1956, are as follows:

ECP No. (CAC-F-102-)	Title
$233r_1$	Finish Requirements - Change of:
1010	Main Landing Gear Skewed Axis - Change to:
1020	Landing Gear Warning System - Positive Warning
1022	Elevator - Change from 10° to 8° Down Surface Travel
1024	Cockpit Ground Air Conditioning - Change of:
1031	Pratt & Whitney P-23 Engine Changes - Group II
1037	2" Rockets - Installation of:
1041	MG-10 Changes - Group IV (Prod.)
1065	Oxygen Cylinder Bottle - Addition of:
1068	Pratt & Whitney P-23 Engine Changes - Group III
1075	MM-2 Attitude Indicator - Interim Installation of:
1079	MG-10 Changes - Group V (Prod.)
1087	Constant Speed Drive Oil System - Rev. of:

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 29 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	3-15-56

2. (Cont.)

EXHIBIT "A": Paragraph (g)
Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbook to be replaced with regular Flight Handbook in March 1956.

3. Equipment listed in the "Equipment Approval Status Record," Report No. ZM-8-091, dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 1 February 1956.

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force Form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report.

Quantity	Description	Part No.
1	Valve Recirculating Oil Instl. 8-22947 G.F.A.E. Part No. 660599 (EPD 4-1-56)	8-22947-7
1	Intervalometer - Rocket Equip. Inst. Install 8-67186 (EPD 3-31-56)	UN 66-2
2	Transformer - Windshield Anti-Ice Instl. 8-68210 (EPD 1-23-56)	TRA 294
1	Intervalometer - Missile Equip. Instl. Instl. 8-67186 (EPD 3-31-56)	UN 120
1 Ea	Window Canopy Glass Instl. 8-73815 Interim TVA 334453 Installs 8-73815-3 &-4 (EPD 2-10-56)	8-73815-7

4. PART B — Shortages as listed in Air Force Form 263C, which affect the performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

Description: Pilot Assist - Operation of (Ref. TVA 46117 on 8-60755)

Part No:
1. Suitable Pitch "G" Limiter
2. Suitable sideslip feedback (Ref. ACA 8-884, and TVA 46116 and TVA 46118 on 8-60754)

Quantity: One each

Limitation: Qualitative flight testing of pilot assist must be completed by contractor and Item 2 must be accomplished prior to activation of pilot assist. Until Item 1 is installed Pilot Assist will be operated only with the following Elevator Limit Switch settings: ± 2.3° above 15,000 feet or below M=0.6; ± 1.0° above M=0.6 at altitudes below 15,000 feet.

Note: Pilot Assist has been deactivated per TVA 46117 on 8-60755.

Description: Roll Maneuver Limitations

Limitation: The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
    a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight).
    b. Do not exceed 80° per second for 360° rolls.
    c. Uncoordinated maneuvers are prohibited.
2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.

4 PART B (Cont.)

Description: Pitch and Yaw Damper Operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a Pitch "G" Limiter, Pitch Damper System shall not be used below 12,000 feet altitude at speeds above 480 knots.

Description: Missile Intervalometer Installation (Ref. ECP 1034)

Part No: CVAC UN 120 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing missiles or opening doors in the Missile Mode

Description: Rocket Intervalometer Installation (Ref. ACA 8-12781 NF)

Part No: CVAC UN 66-2 Intervalometer

Quantity: One

Limitation Must be installed prior to firing rockets or opening doors in the rocket mode.

Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15410, 8-16070)

Part No: GFAE #660599

Quantity: One

Limitation: Until ACA 8-15410 and 8-16070 is accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. Power may occur.

Description: Windshield Anti-Ice Circuit - Add transformers, revise wire gauges and circuits, etc., to increase wattage on NESA glass. (Ref. ACA 8-653 and 8-15496).

4 PART B (Cont.)

Part No. CVAC TRA 294

Quantity: Two

Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the windshield free of ice.

Limitation: The airplane should not be flown in icing conditions until ACA 8-653 and 8-15496 have been incorporated. Also, de-fog may not be provided under extreme conditions.

Description: Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against drawing 8-60674 deactivates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

Description: Rain Clearing System (Ref. ACA 8-954)

Remarks: Hot air blast shield protects vinyl edge of windshield.

Limitation: Rain clearing system should not be used until ACA 8-954 has been incorporated.

Description: ACA 8-14914. Wing attach bolts Spar Six-Interim use of MS type.

Part No: MS 20010-34 (8 pieces per airplane)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.

4. PART B (Cont.)

Limitation: a. Symmetrical Maneuvers -

Do not exceed normal load factor of 5.5g maximum

b. Asymmetrical Maneuvers

1. Do not exceed normal load factor of 3.9g maximum.
2. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight.)
3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

Description: Buzz Fix - High Speed (Ref. ACA 8-813)

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach Number of 1.25.

Description: Trim Servo - Operation of

Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.

Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.

4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263C, Part II.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 20 December 1955.

6. List of items not proven to be interchangeable on this airplane at time of final acceptance on 29 February 1955:

Rudder Nose Door	8-15016-39
	-41
	-43
Wing Leading Edge Panel Assemblies	8-17230-27
	-28
	-29
	-30
	-31
	-32
	-33
	-34
	-35
	-36
Wing Leading Edge Assemblies	8-17232-1
	-2
	8-17233-1
	-2
	8-17234-1
	-2
	8-17235-1
	-2
	8-17236-1
	-2
Wing Tip Assembly	8-17900-9
	-10
Electronics Purge Valve Insp. Door	8-73433-79
Tail Cone Assembly	8-73490
Speed Brake Door Assembly	8-73614-3
	-4

ANALYSIS
PREPARED BY
CHECKED BY
REVISED BY "A"

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

A/C Ser. No. 53-1817
PAGE 1
REPORT NO. ZD-8-035
MODEL F-102A
DATE 31 March 56

REPORT NO. ZD-8-035

PART V

WAIVERS FOR AIRPLANE

SERIAL NO. 53-1817

FORM 1812-A

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 53-1817.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 20 January 1956, are as follows:

ECP No. (CAC-F-102-)	Title
233	Finish Requirements - Change of:
1010	Landing Gear Skewed Axis - Change to:
1011	MG-3 Changes - Group II (Proto)
1020	Landing Gear Warning System - Positive Warning
1022	Aileron & Elevon Travel - Correction of:
1031	Pratt & Whitney P-23 Engine Changes - Group II
1041	MG-10 Changes Group IV (Prod.)
1065	Oxygen Cylinder - Addition of:
1068	Pratt & Whitney P-23 Engine Changes Group III
1075	MM-2 Attitude Indicator - Interim Installation
1086	Structure Overheat Warning Switch - Deletion of:
1104	Strike Camera - Prov. for - Phas VII Aircraft

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 29 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Schedules Date
ZS-8-054	Armament Loads	4-15-56

2. (Cont.)

EXHIBIT "A": Paragraph (g)
Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbook to be replaced with regular Flight Handbook in March 1956.

3. Equipment listed in the "Equipment Approval Status Record," Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 20 January 1956.

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report.

Quantity	Description	Part No.
2	Transformer - Windshield Anti-Ice Install Dwg. 8-68210 (EPD 2-29-56)	TRA 294
1	Intervalometer - Rocket Equip. Inst. Install 8-67186 (EPD 3-2-56)	UN 66-2
1	Intervalometer - Missile Equip. Inst. Install 8-67186 (EPD 3-2-56)	UN 120
1	Valve Recirculating Oil Install 8-22947 G.F.A.E. Part No. 660599 (EPD 4-30-56)	8-22947-7
1	Sight - Inst. Optical #G.F.A.E. (Eng - item to be removed) Inst. Dwg. 8-94943	463169-10

4. PART A (Cont.)

Quantity	Description	Part No.
1	Gear Box & Starter Comb. Install 8-22802 (EPD to be determined - G.F.A.E.)	AERNO 42-8750

4. PART B Shortages as listed in Air Force Form 263C, which affect the performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

Description: Pilot Assist - Operation of (Ref. TVA 46117 on 8-60755)

Part No:
1. Suitable Pitch "G" Limiter
2. Suitable sideslip feedback (Ref. ACA 8-884, and TVA 46116 & TVA 46118 on 8-60754)

Quantity: One

Limitation: Qualitative flight testing of pilot assist must be completed by contractor and Item 2 must be accomplished prior to activation of pilot assist. Until Item 1 is installed, Pilot Assist will be operated only with the following Elevator Limit Switch settings:

±2.3° above 15,000 feet or below M=0.6; ±1.0° above M=0.6 at altitudes below 15,000 feet.

Note: Pilot Assist has been deactivated per TVA 46117 on 8-60755.

Description: Roll Maneuver Limitations

Limitation: The roll restrictions with or without the side slip feedback system operative are:

4. PART B (Cont.)

Limitation: (Cont.)

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
    - a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight)
    - b. Do not exceed 80° per second for 360° rolls.
    - c. Uncoordinated maneuvers are prohibited.
2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction:

    0 to 3.75g.

Description: Pitch and Yaw Damper Operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a Pitch "G" Limiter, Pitch Damper System shall not be used below 12,000 feet altitude at speeds above 480 knots.

Description: Missile Intervalometer Installation (Ref. ECP 1034)

Part No: CVAC UN 120 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing missiles or opening doors in the missile mode.

4. PART B (Cont.)

Description: Rocket Intervalometer Installation (Ref. ACA 8-12781 NF)

Part No: CVAC UN 66-2 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing rockets or opening doors in the rocket mode.

Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15410, 8-16070)

Part No: GFAE #660599

Quantity: One

Limitation: Until ACA 8-15410 and 8-16070 is accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. Power may occur.

Description: Windshield Anti-Ice Circuit - Add transformers, revise wire gauges and circuits, etc., to increase wattage on NESA glass. (Ref. ACA 8-653 and 8-15496).

Part No: CVAC TRA 294

Quantity: Two

Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the windshield free of ice.

Limitation: The airplane should not be flown in icing conditions until ACA 8-653 and 8-15496 have been incorporated. Also, defog may not be provided under extreme conditions.

4. PART B (Cont.)

Description: Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against drawing 8-60674 deactivates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

Description: Rain Clearing System (Ref. ACA 8-954)

Remarks: Hot air blast shield protects vinyl edge of windshield.

Limitation: Rain clearing system should not be used until ACA 8-954 has been incorporated.

Description: ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.

Part No: MS 20010-34 (8 pieces per airplane)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.

Limitation: a. Symmetrical Maneuvers -

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers

1. Do not exceed normal load factor of 3.9g maximum.

4. PART B (Cont.)

Limitation: (Cont.)

2. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight.)

3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

Description: Buzz Fix - High Speed
(Ref. ACA 8-813)

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

Description: Trim Servo - Operation of

Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.

Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.

4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263C, Part II.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 20 December 1955.

6. List of items not proven to be interchangeable on this airplane at time of final acceptance on 29 February 1956:

Rudder Nose Door	8-15016-39 -41 -43
Wing Leading Edge Panel Assemblies	8-17230-27 -28 -29 -30 -31 -32 -33 -34 -35 -36
Wing Leading Edge Assemblies	8-17232-1 -2 8-17233-1 -2 8-17234-1 -2 8-17235-1 -2 8-17236-1 -2
Wing Tip Assembly	8-17900-9 -10
Nose Radome Assembly	8-70410-801
ATM Access Door Assembly	8-72601-27
Electronics Purge Valve Insp. Door	8-73433-79
Tail Cone Assembly	8-73490
Mid-Electronics Door Assembly	8-73608-79
Speed Brake Door Assembly	8-73614-3 -4

ANALYSIS
PREPARED BY
CHECKED BY
REVISED BY "A"

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

A/C Ser. No. 53-1818
PAGE 1
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MODEL F-102A
DATE 29 Feb 56

REPORT NO. ZD-8-035

PART VI

WAIVERS FOR AIRPLANE
SERIAL NO. 53-1818

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 53-1818.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 20 January 1956, are as follows:

ECP NO. (CAC-F-102-)	Title
233	Finish Requirements - Change of:
1010	Landing Gear Skewed Axis - Change to:
1011	MG-3 Changes - Group II (Proto)
1020	Landing Gear Warning System - Positive Warning
1022	Aileron & Elevon Travel - Correction of:
1036	Exhaust Nozzle Vent - Installation of:
1041	MG-10 Changes Group IV (Prod.)
1065	Oxygen Cylinder - Addition of:
1075	MM-2 Attitude Indicator - Interim Installation
1086	Structure Overheat Warning Switch - Deletion of:

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 29 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

EXHIBIT "A": Paragraph (b)
Stress Analysis

Report No.	Title	Anticipated Scheduled Date
ZS-8-054	Armament Loads	4-15-56

2. (Cont.)

EXHIBIT "A": Paragraph (g)
Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbook to be replaced with regular Flight Handbook in March 1956.

3. Equipment listed in the "Equipment Approval Status Record," Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 20 January 1956.

4. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 4 PART B of this report.

Quantity	Description	Part No.
2	Transformer - Windshield Anti-Ice Install Dwg. 8-68210 (EPD 2-29-56)	TRA 294
1	Intervalometer - Missile Equip. Inst. Install 8-67186 (EPD 3-2-56)	UN 120
1	Intervalometer - Rocket Equip. Inst. Install 8-67186 (EPD 3-2-56)	UN 66-2
1	Valve Recirculating Oil Install 8-22947 G.F.A.E. Part No. 660599 (EPD 4-30-56)	8-22947-7

4. PART B Shortages as listed in Air Force Form 263C, which affect the performance or mission of the airplane as noted, performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

4. PART B (Cont.)

Description:	Pilot Assist - Operation of (Ref. TVA 46117 on 8-60755)
Part No:	1. Suitable Pitch "G" Limiter 2. Suitable sideslip feedback (Ref. ACA 8-884, and TVA 46116 and TVA 46118 on 8-60754)
Quantity:	One
Limitation:	Qualitative flight testing of pilot assist must be completed by contractor and Item 2 must be accomplished prior to activation of pilot assist. Until Item 1 is installed, Pilot Assist will be operated only with the following Elevator Limit Switch settings: ±2.3° above 15,000 feet or below M=0.6; ±1.0° above M=0.6 at altitudes below 15,000 feet. Note: Pilot Assist has been deactivated per TVA 46117 on 8-60755.

Description: Roll Maneuver Limitations

Limitation: The roll restrictions with or without the side slip feedback system operative are:

1. Flight region above 12,000 feet, or below 12,000 and 480 knots indicated.
   a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight)
   b. Do not exceed 80° per second for 360° rolls.
   c. Uncoordinated maneuvers are prohibited.

4. PART B (Cont.)

Limitation: (Cont.)

2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction:

0 to 3.75g.

Description: Pitch and Yaw Damper Operation

Part No: Suitable Pitch "G" Limiter

Quantity: One

Limitation: Without a Pitch "G" limiter, pitch damper system shall not be used below 12,000 feet altitude at speeds above 480 knots.

Description: Missile Intervalometer Installation (Ref. ECP 1034)

Part No: CVAC UN 120 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing missiles or opening doors in the missile mode.

Description: Rocket Intervalometer Installation (Ref. ACA 8-12781 NF)

Part No: CVAC UN 66-2 Intervalometer

Quantity: One

Limitation: Must be installed prior to firing rockets or opening doors in the rocket mode.

4. PART B (Cont.)

Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15403, 8-15709, 8-16070)

Part No: GFAE #660599

Quantity: One

Limitation: Until the above ACA's are accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. power may occur.

Description: Windshield Anti-Ice Circuit - Add transformers, revise wire gauges and circuits, etc., to increase wattage on NESA glass (Ref. ACA 8-653 and 8-15496).

Part No: CVAC TRA 294

Quantity: Two

Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the windshield free of ice.

Limitation: The airplane should not be flown in icing conditions until ACA 8-653 and 8-15496 have been incorporated. Also, de-fog may not be provided under extreme conditions.

Description: Electronic Equipment - Ground cooling of (Ref. ACA 8-699, 8-1006)

Remarks: TVA 38104A against drawing 8-60674 de-activates jet pump valve and placards electronic cooling valve lights in master warning panel as inoperative.

Reason: Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine deceleration lags.

4. PART B (Cont.)

Limitation: No electronic compartment ground cooling (unless connected to ground cart) until ACA 8-1006 has been incorporated.

Description: ACA 8-14914. Wing attach bolts Spar Six - Interim use of MS type.

Part No: MS 20010-34 (8 pieces per airplane)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.

Limitation:

a. Symmetrical Maneuvers -

Do not exceed normal load factor of 5.5g maximum.

b. Asymmetrical Maneuvers

1. Do not exceed normal load factor of 3.9g.
2. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight.)
3. For asymmetrical maneuvers below 12,000 feet and speeds above 480 knots (calibrated) the aileron throw is limited to one half (1/2) of the maximum allowable aileron throw.

Description: Buzz Fix - High Speed (Ref. ACA 8-813)

Remarks: Without a 20 inch inlet duct ramp extension boundary layer separation ahead of the inlet occurs at high Mach numbers creating a sharp increase in vibration and noise level.

4. PART B (Cont.)

Limitation: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.

Description: Trim Servo - Operation of

Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.

Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.

Limitations on 8-10 #28 (53-1818) due to instrumentation requirements are as follows:

Description: TVA IN31896 required AIC-10 interphone control circuit.

Remarks: Make provisions for pilot to record comments on voice recorder without using radio transmitter.

Limitation: Stock switch only actuates voice recorder through interphone. Throttle switch actuates radio transmitter.

Note: This limitation is optional at pilot's request.

Description: TVA IN40793 removes R541/ARN-14D Receiver and DY-84/ARN-14A Dynamotor.

Remarks: Space needed for installation of special time coorelation receiving equipment as requested by AFAC.

Limitation: VHF Navigational System inoperative

Note: An AN/ARA-25 UHF Directions Finder is installed to provide a navigational facility.

4. PART B (Cont.)

Description:	TVA IN40796 removes the AN/ARN-12 Receiver and Mounting.
Remarks:	Space needed for installation of AN/ANH-2 Voice Recorder.
Limitation:	Marker Beacon Receiving System inoperative.
Description:	TVA IN37486 replaces the standard pilots instrument panel with a special instrument panel and instruments.
Remarks:	Required to photograph desired flight parameters with cockpit camera.
Limitation:	1. ID 387/ARN Course Indicator removed. 2. Clock removed. 3. Accelerometer installed. 4. Alternator Frequency Meter Installed.
Description:	TVA IN 40800 and IN 42894 removes aft center armament launcher.
Remarks:	Space provisions for instrumentation platform and equipment.
Limitation:	No armament in aft center missile bay (remainder of launchers are operable).
Description:	TVA IN 42658 removes ARN-18.
Remarks:	Space needed for installation of land-air equipment.
Limitation:	Navigational system inoperative (AN/ARA-25 UHF directional finder is installed to provide a navigational facility).

4. PART C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in Air Force Form 263C, Part II.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 20 December 1955.

6. List of items not proven to be interchangeable on this airplane at time of final acceptance on 29 February 1956:

Rudder Nose Door	8-15016-39
	-41
	-43
Wing Leading Edge Panel Assemblies	8-17230-27
	-28
	-29
	-30
	-31
	-32
	-33
	-34
	-35
	-36
Wing Leading Edge Assemblies	8-17232-1
	-2
	8-17233-1
	-2
	8-17234-1
	-2
	8-17235-1
	-2
	8-17236-1
	-2
Wing Tip Assembly	8-17900-9
	-10
Nose Radome Assembly	8-70410-801
ATM Access Door Assembly	8-72601-27
Electronics Purge Valve Insp. Door	8-73433-79
Tail Cone Assembly	8-73490
Mid-Electronics Door Assembly	8-73608-79
Speed Brake Door Assembly	8-73614-3
	-4

8

ZD-8-036

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-036
DATE 20 December 1955
MODEL F-102A

TITLE
REPORT NO. ZD-8-036
DOCUMENTATION FOR WAIVERS
FROM CONTRACTUAL REQUIREMENTS
FOR ACCEPTANCE OF
F-102A AIRPLANE AF S/N 53-1797

CONTRACT AF33(600)-5942

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
A	6-20-57	WFB	Revised to reflect configuration at time of final acceptance	All

FORM 1812 A-4

This report is prepared to define the condition of the aircraft for final acceptance by the Air Force.

PART I:

The following items are deviations from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1797.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 20 June 1957 are as follows:

None

2. Engineering data listed in exhibit of the contract which were required to be submitted prior to 20 June 1957 but which have not been submitted as of that date, are as follows:

None

3. PART A The following are shortages as of 20 June 1957. It is anticipated that these items will be reflected in the Form DD-780-2 consisting of 3 pages dated 20 June 1957 and Form DD-250 consisting of 99 pages dated 20 June 1957.

3. PART B Flight limitations as listed in Department of Defense Form DD-781, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or the intended usage.

3. PART C Work tasks not accomplished on this airplane shall be referenced in Department of Defense Form DD-780-2 consisting of 3 pages dated 20 June 1957, and Form DD-250 consisting of 99 pages dated 20 June 1957.

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION

SAN DIEGO

REPORT ZD-8-037 A

DATE 30 April 1956

MODEL F-102A

REPORT NO. ZD-8-037

TITLE

DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANES

A. F. SERIAL NO'S.
54-1384 THRU 54-1400

CONTRACT AF33(600)-23903 A

PREPARED BY W. M. Gossett

GROUP PROJECT SPECIFICATIONS

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES 9

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
A	5-12-56	W.M.G.	Changes as noted.	1, 2, 3, 4, & 6.

This report is prepared to define the condition of these airplanes as of factory completion for acceptance by the Air Force.

Aircraft Serial No.

54-1384
54-1385
54-1386
54-1387
54-1388
54-1389
54-1390
54-1391
54-1392
54-1393
54-1394
54-1395
54-1396
54-1397
54-1398
54-1399
54-1400

1 Engineering Changes which have been incorpora
Proposals have been submitted to AMC but which
are as follows:

REV. "A"

ECP NO. CAC-F-102	TITLE
$1010R_1$	Main Landing Gear - Skewed Axis
~~1076~~	~~Interim Installation - Canopy Defog~~
~~1024~~	~~Cockpit Ground Air Conditioning -~~ Change of
1037	2" Rockets - Installations of
1131	Enlarged Area Vertical Fin Installation of:

This page corrected
as of 20 July 1956

ed in the noted aircraft for which Engineering Change
have not been approved as of

AIRCRAFT AFFECTED	VALID	CANC.
54-1384 Thru 54-1400		
~~54-1384 Thru 54-1400~~		
~~54-1384 Thru 54-1400~~		
54-1384 Thru 54-1400		
54-1390 and 54-1398		

2 Engineering Data listed in Exhibits and Table
to 25 April 1956 , but which have not been s
refer to those of the Contract Exhibits and T

REV. "A"

	REPORT NO.
Para. 2.A of Table I Part B. as required by Item 4 of Contract AF33(600)-23903.	ZS-8-058 ZS-8-059

of the Contract which were required to be submitted prior bmitted as of that date, are as follows (Paragraph numbers bles):

TITLE	ANTICIPATED SCHED. DATE	VALID	CANC.
Control System Analysis	1 May 1956		
Armament Analysis	16 June 1956		

3 PART A The following are shortages at time o
reflected in Dept. of Defense Form DD
certain limitations on these noted A/
Aircraft Prior to 54-1389. Refer to A
Dates shown as expected parts deliver
date of installation in the airplane.

Items denoted by a number within a ci
Paragraph 3 PART B.

REV. "A" (CONTRACTOR FURNISHED EQUIPMENT)

QUANTITY	DESCRIPTION
1 ea.	Door Installation - Speed Brake Inst'l Ref: 8-73674 Doors 8-73634-3 & 5 Installed EPD - (3)4-2-56, (2)4-16-56, (1)4-30-56, (1)5-28-56, (2)6-30-56, (4)7-2-56, (4)7-30-56.
	(GOVERNMENT FURNISHED AIRCRAFT EQUIPMENT)
1	Gear Box & Starter Combustion Inst'l. 8-22802 GFAE Part Aerno 42-8750 EPD-(1)4-18-56, (1)-4-20-56, (1)4-24-56, (1)6-7-56, (2)6-12-56, (1)6-25-56, (1)7-3-56, (1)7-9-56, (1)7-11-56, (1)7-13-56.
1 ea.	Fire Control Portion of Aircraft and Weapons Control System MG-10 DWG WCLG 720A

3B

This page corrected
as of 20 July 1956

f factory completion. It is intended that these items will be
250 or DD780. Some of the following shortage items impose
C; these limitations are defined in 3 PART B of this report.
F Form 263c Part II.
y date (EPD) are parts availability date and do not constitute

rcle indicate a shortage with a corresponding limitation in

PART NO.	AIRCRAFT AFFECTED	VALID	CAN.
3-73674-73 3-73674-75	54-1384 Thru 54-1400		
AERNO 42-8750	54-1388		
AERNO 52-4363	54-1390 and 54-1398		

3 PART B Limitations to the airplane. Unaccomplished work Form DD250 or DD780, which affect the performance mission of the airplane is interpreted to mean th

REV. "A"

LIMITATION NUMBER	DESCRIPTION	PART NUMBER
1.	Pilot Assist Remarks: Further flight testing of pilot assist has been discontinued due to the customers preference for Hughes Automatic Flight Control System. 1F-102-527 dtd. 10 March 1956 de-activates Pilot Assist. Limitation: No Pilot Assist.	
2.	Roll Maneuver Limitations Limitation: The roll restrictions with or without the side slip feedback system operative are: 1. Flight region above 12,000 ft, or below 12,000 and 480 knots indicated. a. No roll rate restrictions for positive quadrant rolls. (90° either side of level flight). b. Without side slip feedback operative, do not exceed 80°/Sec. for 360° rolls. c. With side slip feedback operative, do not exceed 120°/Sec. for 360° rolls.	

tasks and/or shortages as listed in Dept. of Defense
or mission of the airplane as noted. Performance or
e flight test assignment or intended usage.

QTY	EFFECTIVITY AND REMARKS	VALID	CANC
	54-1384 Thru 54-1400		
	54-1384 Thru 54-1400 (Except 54-1390 & 54-1398) These two aircraft have large tail change accomplished.		

LIMITATION NUMBER	DESCRIPTION	PART NUMBER
2.	Limitation: (Cont) d. Uncoordinated maneuvers are prohibited. 2. For flight regions above 480 knots indicated and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75g.	

QTY	EFFECTIVITY AND REMARKS	VALID	CANC.	[illegible]

REV. "A"

LIMITATION NUMBER	DESCRIPTION	PART NUMBER	QTY
3.	Pitch and Yaw Damper Operation Remarks: Pitch damper operation limited pending completion of flight tests Limitation: Pitch damper system shall not be used below 12,000 feet altitude at speeds above 480 knots.		
5.	Electronic Equipment - Ground cooling of: (Ref: ACA 8-699, 8-1006) Rapid retarding of throttle to idle position can cause duct coupling to fail from excessive pressure as valve opens at idle position and engine de-celeration lags.		

EFFECTIVITY AND REMARKS	VALID	CANC.
54-1384 Thru 54-1400		
54-1384,1385,1386,1387,1391 Note: The above noted A/C are scheduled for service action accomplishment.		

LIMITATION NUMBER	DESCRIPTION	PART NUMBER	QTY
5.	(Cont) No electronic ground cooling unless connected to ground cart until ACA 8-1006 has been incorporated. Remarks: TVA 38104A against Dwg. 8-60674 deactivates jet pump valve and placards electronic cooling valve lights in master warning panels as inoperative.		
6.	Buzz Fix - High Speed Ref: (ECP 1094) Remarks: Without a 20 inch inlet duct ramp extension, boundary layer separation ahead of the inlet occurs at high Mach number, creating a sharp increase in vibration and noise level. Limitations: Until ACA 8-813 is incorporated, airplane is limited to a maximum Mach number of 1.25.		
7.	Trim Servo - Operation of. Remarks: Low level operation with trim servo, which might prove hazardous in the event of a malfunction is restricted until sufficient service familiarity and IDE approval of system components is obtained.		

EFFECTIVITY AND REMARKS	VALID	CANC.
54-1384 - 1387,1389,1391 - 1397, 1399 & 1400. Note: The above noted A/C are not presently scheduled to receive the buzz-fix.		
54-1384 Thru 54-1400		

LIMITATION NUMBER	DESCRIPTION	PART NUMBER	QTY
7.	(Cont) Limitation: Do not engage trim servo at altitudes less than 5000 feet above the terrain.		
8.	Windshield Anti-Ice System (Ref. ACA 8-1116) Remarks: Since procurement of Control Box CONT 178-1, it has become apparent that the addition of two power relays are necessary to handle the increased load. Failure of contacts in the control box, due to excessive load, causes power to remain on windshield, resulting in glass failure. Limitation: Do not fly in icing conditions until ACA 8-1116 has been accomplished. Note: Transformers have been by-passed by TVA 47554 on 8-60652 permitting limited de-fog but no anti-ice.		

EFFECTIVITY AND REMARKS	VALID	CANC.
54-1384 Thru 54-1400. Note: The above noted A/C are scheduled for service action accomplishment.		

LIMITATION NUMBER	DESCRIPTION	PART NUMBER	QTY
	Limitations on Aircraft 54-1388 & 54-1390 54-1398 due to instrumentation requirements are as follows: 1. MG-3 system rendered inoperative 2. Missile launching and rocket firing inoperative. 3. Missile bay doors inoperative in-flight. 4. APX-25 (IFF) removed. 5. ARN-18 removed. 6. ARN-14 rendered inoperative by removal of B7A amplifier. 7. Pilot assist (previously made inoperative, electrically, by E&R Group) removed, The above instrumentation restrictions will remain effective for AF54-1390. and 54-1398 during the entire flight test program. They will be modified for AF54-1388, after anti-icing tests, to lift restrictions on MG-3, APX-25, ARN-18 and ARN-14 for heating and venting tests. 3 PART C		

Work tasks not accomplished on this airpl
acceptance shall be referenced in Air For
or in Department of Defense Forms DD250 o

EFFECTIVITY AND REMARKS	VALID	CANC.
ane at time of final ce Form 263c, Part II, r DD780 as applicable.		

ZD-8-042

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-042
DATE 31 December 1955
MODEL F-102A

TITLE

REPORT NO. ZD-8-042
DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANE AF S/N 53-1813

CONTRACT AF33(600)-5942

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES 9

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
A	12-27-55	WMG	Corrections & Changes	1,1,2,3,8,9

FORM 1812 A-4

This report is prepared to define the condition of the aircraft as of factory completion for conditional acceptance by the Air Force.

PART A

The following items are deviations from contractural requirements for Model F-102A Airplane, AF Serial No. 53-1813.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 8 December 1955, are as follows:

ECP No. (CAC-F-102-)	Title
$1010R_1$	Main Landing Gear Skewed Axis Change to:
1020	Landing Gear Warning System - Positive Warning
1022	Elevator - Change from 10° to 8° Down Surface Travel
1031	Pratte Whitney P-23 Engine Changes - Group II
$1032R_1$	Rocket Boost - Installation of:
1036	Exhaust Nozzle Control Vent Line - Installation of:
1040	MG10/MG10T Changes - Group III (Production)
1041	MG10 Changes - Group IV (Production)
1087	Constant Speed Drive Oil System - Revision of:

2. Engineering Data Listed in Exhibits and Tables of the contract which were required to be submitted prior to 9 December 1955, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of Exhibits and Tables of the contract):

EXHIBIT "A"

Paragraph (b) Stress Analysis

Report No.	Title	Anticipated Schedule Date
ZS-8-054	Armament Loads	3-15-56
ZS-8-058	Control System Analysis	1-2-56

Paragraph (g) Flight Handbook

Contractor is supplying Preliminary Utility Flight Handbooks to be replaced with regular Flight Handbooks in March 1956.

3. Equipment listed in the "Equipment Approval Status Record", Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of November 1955.

4. PART A The following are shortages at time of factory completion. It is anticipated that these items will be reflected in the Air Force Form 263 C Part II.
(EPD) Expected Parts Delivery Date

Quantity	Description	Part No.
1	Cable-Linkage Instl. 8-40530 Interim Part Insld., Vendor to Establish (EPD)	Seal 175
1	Pitch G Limiter Instl. 8-90704 (EPD to be Determined by Vendor)	UN 100-1
1	Elevator Trim Instl. 8-68190 (EPD 2-1-56)	UN 110-1
1	Potentiometer Installation Instl. 8-49876 (EPD 2-1-56)	UN 110-2
1	Trans-Elev. Trim Instl. 8-49393 (EPD 2-1-56)	UN 110-3
1	TK Pylon Wing Ext Instl. 8-17007 (EPD 12-12-55)	8-17005-1
4	Struct-Wing - Aft Tank Instl. 8-17032 (EPD 12-12-55)	8-67387-1
1	Rocket Intervalometer Instl. Dwg. 8-66186 (EPD 1-2-56)	UN 66-2
1	Missile Intervalometer Instl. ACA 8-20435 (EPD 3-1-56)	UN 120
2 ea	Radome Anti-Icing System ACA 8-72968 (EPD 12-27-55)	AN6230-B2 AN6230-B3

4. PART A (Cont.)	Quantity	Description	Part No.
	2	Rib Int. Box Instl. 8-17386 (EPD 12-12-55)	8-17386-95
	1	Rib Inst. Instl. 8-17387 (EPD 12-12-55)	8-17387-46
	1	Rib B/L 101.20 Int. Instl. 8-17388-801 (EPD 12-12-55)	8-17388-39
	1	Rib-Intermediate Box Instl. 8-17388-802 (EPD 12-12-55)	8-17388-40
	1	Rib Installation Instl. 8-17389-3 (EPD 12-12-55)	8-17389-35
	1	Rib Installation Instl. 8-17389-4 (EPD 12-12-55)	8-17389-36
	1	Rib Installation Instl. 8-17390-3 (EPD 12-12-55)	8-17390-39
	1	Rib Installation Instl. 8-17390-4 (EPD 12-12-55)	8-17390-40
	1	Door #9 Wing - L/H Instl. 8-17659 (EPD 12-12-55)	8-56418
	8	Wing Spar Fuselage Attach Bolts Instl. 8-10030, Sht 1, Chg H (EPD Pending A.F. Approval)	MS 20010-34

4. PART B Shortages as listed in Air Force Form 263 C, Part II, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or the intended usage. (EPD) Expected Part Delivery Date

Description: Pilot Assist
Ref. ACA 8-724 8-754 8-762 8-884
8-734 8-757 8-777 8-886
8-735 8-760 8-810

4. PART B (Cont.)

Part No:

1. Suitable Pitch "G" Limiter
2. Suitable Roll Coupling Limiting Device (Ref. ACA 8-754, 8-884)
3. Elevator Limit Switches (Ref. ACA 8-735, 8-810)
4. Aileron Limit Switches (Ref. ACA 8-734)
5. CVAC #POTE 17-6-1 (Ref. ACA 8-11864)
6. Low Force Lockout Valves CVAC #VA 1056 & VA 1056-1 (Ref. ACA 8-777)
7. UN 36-29 (Ref. ACA 8-724)

Limitation: Above items 3, 4, 5 and 7 must be installed prior to or concurrent with activation of the automatic flight control system. Until items 1 and 2 are installed, PA will be used only within the aileron limit switch settings and flight regimes specified in DC-3-340, and the following elevator limit switch settings: ± 2.3° above 15,000 Ft. or below M=0.6 ± 1.0° above M=0.6 at altitudes below 15,000 Ft. Until item 6 is installed, forces required, for and surface transients resulting from, the PA manual override feature are excessive. Manual over-ride should be attempted only as a last resort.

Note: Items 3 and 4 will be superceded by items 1 and 2.

Description: Pitch and Yaw damper operation.

Part No: Suitable pitch "G" limiter.

Quantity: One

Limitation: Without a pitch "G" limiter, pitch damper system shall not be used below 15,000 feet altitude.

Remarks: Pitch damper has been de-activated on S/N 53-1813 for delivery flight by TVA 44756 on Drawing 8-60754. No restriction on use of yaw damper with pitch damper de-activated.

(All parts available, except item #1 above. These are developed systems and item availability is to be determined by the vendor.)

4. PART B (Cont)

Description: Rocket Intervalometer Installation (Ref. ACA 8-12781 NF)
Part No: CVAC UN66-2 (EPD 1-2-56)
Quantity: One
Limitation: Must be installed prior to firing rockets or opening doors in flight in the rocket mode.

Description: Missile Intervalometer Installation (Ref. ECP 1034)
Part No: CVAC UN 120 (EPD 3-1-56)
Quantity: One
Limitation: Must be installed prior to firing missiles or opening doors in flight in the missile mode.

Description: Windshield anti-ice circuit - add transformers, change wire gauges, revise circuits, etc., to increase wattage on nesa glass. (Ref. ACA 8-653 and 8-15496)
Part No: CVAC TRA 294 (Vendor to Furnish Availability Date)
Quantity: Two
Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the windshield free of ice.
Limitation: The airplane should not be flown in icing conditions until ACA 8-653 and 8-15496 have been incorporated. Also, de-fog may not be provided under extreme conditions.

Description: Hydraulic System Relief Valve - addition of Thermal Venting. (Ref. ACA 8-531 and ACA 8-13450)
Part No: VA 981-1 Valve
Quantity: Two
Remarks: In case of pump flow control malfunctioning, the hydraulic oil may heat up by working against the relief valve pressure. With this valve (VA 981-1) the relief valve will open at pre-determined oil temperature to protect the system.
Limitation: Land as soon as possible if primary or secondary system oil pressure indicator consistently shows above 3500 PSI.

Description: Electrical Receptacle, Forward Fuel Cell - revision of. (Ref. ACA 8-617 and ACA 8-14751)
Remarks: Provides seal at forward fuel cell electrical receptacle.
Limitation: Must be accomplished before missiles and/or rocket firing to prevent missile dust from entering area between wing and fuselage, thus causing corrosion.

4. PART B (Cont.)

Description: Electronic Compartment Ground Cooling - Revision of
(Ref ACA) 8-699 8-14607 8-14628 8-15178
8-14621 8-14714 8-14386 8-14643
8-15083 8-14521 8-15097

Part No: VA 931-2
Quantity: One (EPD 12-23-55)
Remarks: Present system provides insufficient electronic ground cooling as revealed by flight test.
Limitation: Electronic equipment cannot be operated on ground during high ambient conditions (approximately 120°) until the above ACA's have been incorporated.

Description: Fuel Flow Joiner (Ref. ACA 8-708)
Part No: REG 150-3 (EPD 3-2-56)
Quantity: One
Remarks: Provides fuel flow joiner in tank to engine fuel system to equalize the flow quantity-wise. This insures equal depletion from both sides and climates present necessity of pilot to maintain lateral balance with boost pump switch control.
Limitation: Until accomplished, pilot must monitor fuel quantity to maintain equal distribution.

Description: Armament Control System - revision of:
(Ref ACA) 8-766 8-14772 8-14817 8-14710
8-783 8-14771 8-14954 8-14385
8-14707 8-14768 8-15044 8-15549

Part No: SW 2791, Availability presently unknown, LI 320, Box 166-2 (EPD 12-30-55)

Quantity: One each

Remarks:

1. Adds door rocket grounding receptacle for grounding ignitors while loading rockets.
2. Adds relay box, door switches and launcher switches; all of which are required for armament re-set system to prevent inadvertent and/or out of sequence door and launcher operation.
3. Replaces mis-fire light with one that can be tested and dimmed.

Description: Radome Anti-Ice System ACA 8-72968
Remarks: Present Anti-Ice distribution ring found inadequate in tests.
Limitation: Reduced radar capability during icing conditions.

4. PART B (Cont)

Limitation:
1. Ignitors must be grounded while loading rockets.
2. Before applying power to the armament system, the pre-operating procedure as outlined in safety supplement of report ZM-8-124 must be followed.
3. Missile mis-fire light cannot be tested.

Description: Twin Boost Pump Installation - wing fuel system (Ref. ACA
8-795 8-15846 8-15640
8-14835 8-14902 8-15137
8-14943 8-15074 8-15537
8-14944 8-15177 8-15737
8-15063 8-15174

Part No: 8-21503-1, -2 and 8-21517-1, -2
Quantity: One each.
Remarks: Provides boost pumps which will pick up fuel during all attitudes of flight and decreases amount of unusable fuel.
Limitation: Until accomplished, alternate dives and climbs and similar maneuvers with low fuel quantity is restricted.

Description: Rain clearing system (Ref. ACA 8-15321)
Part No: CVAC VA 931-4 (EPD 12-23-55)
Quantity: One
Limitation: All weather operations should not be planned until valve VA 931-4 is installed.

Description: Constant Speed Drive - Oil System for.(Ref. ACA 8-15409)
Part No: CVAC FI 23-5 (EPD 12-15-55)
Quantity: One
Limitation: Until ACA 8-15409 is accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. power may occur.

Limitations due to instrumentation requirements are as follows:

TVA No: IN-42862 (3 sheets) and TVA IN-40943 Armament Installation.
Remarks: This TVA and TVA IN-40943 render inoperative armament control system.

4. PART B (Cont.)

LIMITATION: These TVA's do not actually limit any operation. However, it would not be advisable to have the missile bay doors open in flight due to the flight test instrumentation installed in center, forward and aft missile bays.

TVA No: IN-42865 Tubing Installation - Pneumatic System.
Remarks: To remove components rendered useless by removal of launcher for instrumentation missile bay.
Limitation: This TVA does not actually limit any operation. However, it would not be advisable to have the missile bay doors open in flight due to the flight test instrumentation installed in center forward and aft missile bays.

Description: Wing Spar Fuselage Attach. Bolts.
Remarks: Temporary load factor limitations as a result of installation of P/N MS 20010-34 wing spar fuselage attach. bolts (wing spar No. 6) until optimum bolt is approved.
Limitation: The airplane is temporarily limited to the following:

Symmetrical Maneuvers

1. Normal load factor + 4.7g maximum

Asymmetrical Maneuvers

1. Normal load factor + 3.1g maximum
2. Roll rate limited to 100°/sec. for changes in angle of bank of 100°.
3. Aileron angle is restricted to ± 3.3° (1/2 throw) for all speeds above 420 knots calibrated airspeed for altitudes below 12,000 feet.

Installation of the gloved vertical tail imposed the following limitations:

1. Initial flights are restricted to $M=0.9$ or 350 knots IAS, whichever occurs first. This restriction will be revised as data are obtained and reviewed.
2. Roll maneuvers are restricted to the altitude range from 12,000 feet to 40,000 feet.
3. Maximum allowable lateral acceleration at airplane C.G. during rolling maneuver is 0.5 "g". This restriction may be revised as data are obtained and reviewed.
4. Due to lateral gusts the maximum symmetrical maneuver speed is 530 knots IAS.

4. PART C Work tasks not accomplished on this airplane at time of final delivery shall be referenced in the Air Force Form 263C Part VI.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 31 December 1955.

6. List of Items not proven to be interchangeable on this airplane at time of final acceptance on 22 December 1955:

Rudder Nose Door	8-15016-39
	8-15016-41
	8-15016-43
Wing Leading Edge Panel Assy	8-17230-27
	8-17230-28
	8-17230-29
	8-17230-30
	8-17230-31
	8-17230-32
	8-17230-33
	8-17230-34
	8-17230-35
	8-17230-36
Wing Leading Edge Assy	8-17232-1
	8-17232-2
Wing Leading Edge Assy	8-17233-1
	8-17233-2
Wing Leading Edge Assy	8-17234-1
	8-17234-2
Wing Leading Edge Assy	8-17235-1
	8-17235-2
Wing Leading Edge Assy	8-17236-1
	8-17235-2
Wing Tip Assy	8-17900-9
	8-17900-10
Nose Radome Assy	8-70410-801
ATM Access Door Assy	8-72601-27
Electronic Purge Valve Inspection Door	8-73433-79
Tailcone Assy	8-73490
Mid-Electronic Door Assy	8-73608-79
Speed Brake Door Assy	8-73614-3
	8-73614-4

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-042
DATE 31 December 1955
MODEL F-102A

CONTRACT NO. AF33(600)-5942

TITLE

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

SPECIFICATION FOR

DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANE AF S/N 53-1813

REPORT NO. ZD-8-042

GROUP Project Specifications

PREPARED BY
1 ____________
2 ____________

CHECKED BY
1 ____________
2 ____________

APPROVED BY
1 ____________
2 ____________

APPROVALS EXAMINER ____________

RELEASED BY ____________

DATE RELEASED ____________

NO.	DATE	BY	REVISIONS	PAGES AFFECTED
A	12-27-55	WMG	Corrections and Changes	1,1,2,3,8,9
B	11-28-56	DDF	Revised and Rewritten	All

FORM 1812 A-8

This report is prepared to define the condition of the aircraft as of factory completion for final acceptance by the Air Force.

PART A

The following items are deviations from contractural requirements for Model F-102A Airplane, AF Serial No. 53-1813.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 28 November 1956, are as follows:

ECP No. (CAC-F-102-)	Title

None

2. Engineering Data listed in Exhibits and Tables of the contract which were required to be submitted prior to 28 November 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of Exhibits and Tables of the contract):

EXHIBIT "A"

Paragraph (b) Stress Analysis

Report No.	Title	Anticipated Schedule Date

None

3. PART A The following are shortages at time of factory completion. It is anticipated that these items will be reflected in the Department of Defense Form DD-250.

Quantity	Description	Part No.

(Reference Department of Defense Form DD-250)

3. PART B Shortages as listed in Department of Defense Form DD-781 which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or the intended usage.

A. The shortages and limitations on the subject airplane have been reviewed. Until the items noted herein have been cleared, the following restrictions and limitations should be indicated on DD Form 781 and/or in the required Service Handbooks where applicable. These limitations should be observed in addition to those already published in the Flight Handbook.

NOTE: This airplane has been under an accelerated flight test program and as a result, has a gloved tail for roll coupling tests on the enlarged fin and a side stick configuration for customer evaluation. Since it is anticipated that the customer will bail the aircraft back to the Contractor for modification to incorporate the F-106A HAC instrument display, the Specification Conformance Changes (Report ZM-8-162) have not been accomplished except where necessary. Restrictions due to this unaccomplished task are identified by an asterisk (*).

1. Description: Speed and Symmetrical Load Factor Limitations

Limitation: Limit Dive Speed except:

a. Max. speed below 10,000 feet is 550 knots I.A.S. (Ref. ACA 8-1443 - Intake Duct Attach.)

b. Max. speed below 10,000 feet in "turbulent" air is 500 knots I.A.S. (Permanent Gloved Tail Restriction)

c. Max. speed above 8,000 feet is 570 knots I.A.S. or Mach = 1.25, whichever occurs first. (Ref. ECP 1094 - Buzz Fix)

d. Max. speed at all altitudes is 550 knots or Mach = 1.28 whichever occurs first (Permanent flutter restriction gloved tail)

3. PART B (Cont)

e. Symmetrical normal load factor is +5.6 g. to +2.4 g. except at speeds in excess of 480 knots I.A.S. below 12,000 feet where the load factor is +5.6 g. to -1.4 g.

2. Description: Roll Maneuver and Asymmetric Load Factor Limitations

Limitation: With Yaw Damper and Turn Coordinator operative, full aileron (7°) is permissible with a load factor of 0 g. to +4 g. except at speeds in excess of 450 knots I.A.S. below 20,000 feet where aileron is limited to 1/2 throw (approx. 4°) with a load factor of 0 g. to +4 g.

3. Description: Rudder Pedal Forces

Limitation: Pedal Forces are limited to 144 lb. max. rapidly applied, above 270 knots I.A.S.

*4. Description: Constant Speed Drive, Oil System for (Ref. ECP 1203)

Limitation: Until the above ECP is accomplished, zero or negative "g" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "g" conditions and lack of AC power may occur.

5. Description: Pitch and Yaw Damper Operation

Limitation: Pitch Damper System shall not be used below 5,000 feet at speeds in excess of M = 0.95 until the airplane has been cleared for 100% limit load factor maneuvers.

3. PART B (Cont)

6.	Description:	Trim Servo - Operation of
	Remarks:	Low level operation with trim servo, which might prove hazardous in the event of a malfunction, is restricted until sufficient service familiarity and IDE approval of system components is obtained.
	Limitation:	Do not engage trim servo at altitudes less than 5,000 feet above the terrain.
* 7.	Description:	Twin Boost Pump Installation - Wing Fuel System
	Remarks:	Twin boost pumps are not presently installed in this aircraft, thus decreasing the amount of usuable fuel.
	Limitation:	Until installed, alternate dives and climbs, and maneuvers with low fuel quantity is restricted as provided for in handbooks.
* 8.	Description:	Hydraulic System Relief Valve - Addition of Thermal Venting. (Ref. ACA 8-531 and 8-13450)
	Remarks:	In case of pump flow control malfunctioning, the hydraulic oil may heat up by working against the relief valve pressure. With incorporation of this change the relief valve will open at predetermined oil temperature to protect the system.
	Limitation:	Land as soon as possible if primary or secondary system oil pressure indicator consistently shows above 3500 psi.
9.	Description:	Pilot Assist
	Remarks:	Technical Order 1F-102 -527 dated 26 April 1956 de-activates Pilot Assist.

3. PART B (Cont)

* 10. Description: Armament System - Operation of

Limitation: No armament firing or door operation

*11. Description: Fire Control System - Operation of

Limitation: Electronic equipment not installed.

3. PART C Work tasks not accomplished on this airplane at time of final delivery shall be referenced in the Department of Defense Form DD-250, Shipment Order No. 16942 consisting of 81 pages.

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-049
DATE 31 Oct 1955
MODEL TF-102A

TITLE

REPORT NO. ZD-8-049

DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF TF-102A AIRPLANE AF S/N 54-1351

CONTRACT AF33(600)-23903

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES 14
NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
"A"	Oct.31-55	WMG	5. Part "C", 1st Paragraph	Pg 9
"B"	Nov.18-55	WMG	Added - Para. 7	Pg 14

FORM 1812A-4

This report is prepared to define the condition of the aircraft as of factory completion for final acceptance by the Air Force.

PART I:

The following items are deviations from contractual requirements for Model TF-102A Airplane, AF Serial No. 54-1351.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 7 October 1955, are as follows:

ECP No. (CAC-F102-)	Title
507	Center of Gravity Location - Correction of:
1010	M.L.G. Skewed Axis - Change to:
1020	Landing Gear Warning System - Positive Warning
1022	Elevator - Change from 10° to 8° Down Surface Travel
1038	Incorporation of AF Comment & Misc. Spec. Corrections
1069	Negative "G" Valve - Deletion of:

2. Engineering data listed in exhibit of the contract which were required to be submitted prior to 31 October 1955, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract exhibit):

Report No.	Title
(1)	Flight Handbook
Remarks:	Preliminary Hdbk to be delivered approximately 31 October 1955.
(2)	Maintenance Handbooks
Remarks:	Anticipated submittal date 1 November 1955.
(3)	Structural Repair Instructions
Remarks:	Anticipated submittal date 15 November 1955.
(4)	Illustrated Parts Breakdown
Remarks:	Anticipated submittal date 28 November 1955.
(5)	Inspection Requirements
Remarks:	Anticipated submittal date 1 November 1955.

PART I
2. (Cont)

	Report No.	Title	To be Submitted
	(6)	Weight & Balance Data	
	Remarks:	(a) Prel. A & E Charts to be submitted approximately 1 December 1955. (b) Calculated W & B Report to be submitted approximately 12 October 1955. (c) Actual Weight & Balance Report to be submitted approximately 1 December 1955.	
	(7)	Detail Lubrication List	
	Remarks:	To be submitted approximately 24 October 1955.	
	(8)	Aircraft Characteristics & Performance Data Requirements Substantiating Data Report	
	Remarks:	To be submitted approximately 21 October 1955.	
	(9)	Stress Analysis	
a)	ZS-8-060	Wing & Elevon Loads	8-1-56
b)	ZS-8-061	Fin & Rudder Loads	8-1-56
c)	ZS-8-062	Fuselage Loads	7-1-56
d)	ZS-8-063	Control System Loads	8-1-56
e)	ZS-8-064	Armament Loads	10-1-56
f)	ZS-8-065	Wing & Elevon Analysis	10-1-56
g)	ZS-8-066	Fin & Rudder Analysis	10-1-56
h)	ZS-8-067 ZS-8-037	Fuselage Analysis	10-1-56
i)	ZS-8-068 ZS-8-037	Control System Analysis	12-1-56
j)	ZS-8-069	Armament Analysis	10-1-56
k)	Menasco Report 166S Supp #2 Ldg. Gear Analysis 165S		8-1-56

3. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-091 dated 19 February 1954, revised 29 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 31 October 1955.

4. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have not been approved as of 31 October 1955.

NOTE: It is anticipated that Items 3 and 4 will be revised on 1 December 1955 and each month thereafter.

5. PART A The following are stortages at time of factory completion. It is anticipated that these items will be reflected in the Air Force Form 263C Part 2.

Quantity	Description	Part No.
1	Blind Flying Enclosure Instl. 8-99641	8-99641
2	Control Stick Grip	GRIP 12
1 each	Actuator - Aft Barrel Instl. 8-81017-903, -904	POTE 17-6
1	Pressure Relief Valve Instl. 8-87699-1	8-89148
1	Pitch "G" Limiter Instl. 8-90704	UN 100-1
1	Control - Elevator Trim Instl. 8-63504	UN 100-1
1	Potentiometer Instl - Support Bracket Instl. 8-49876	UN 110-2
1	Transducer Instl. Instl. 8-63043	UN 110-3
6	Missile Launcher Rails Instl. 8-54990	463054-113
1	Engine Drain Fitting Instl. 8-27442	8-27388-5
2	Radar Door Instl Instl. 8-75011-2	FAS 327-12-12
3		FAS 372-6
5		FAS 4004-1
1	Structure Installation Instl. 8-75412	8-75412-39

5. PART B Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or the intended usage.

Description: Automatic Flight Control System (Ref. ACA 8-523)
Part No: Pote 17-6 per ACA 8-523 and Pitch Limiting Device when available.
Quantity: Pote 17-6 (2) and Pitch Limiting Device (1)
Limitation: The above parts must be installed prior to or concurrent with installation of the AFCS.

Description: Pitch and Yaw Damper System (Dwg. 8-68155)
Part No: Pitch Limiting Device
Quantity: One
Limitation: Pitch Damper System shall not be used below 12,000' at speeds in excess of 420 Kts. IAS until a pitch limiting device is installed.

Description: Trim Servo and Speed Brake (Ref: ACA 8-740, ACA 8-500* and 8-20422)
Part No: UN 110-1, UN 110-2, UN 110-3, UN 110-5*
Quantity: One each
Limitation: There will be no automatic elevator deflection to compensate for pitching effect from speed brake extension and no automatic trim for unstable stick forces until above units are installed.

Description: Windshield overheat circuit - addition of (Ref. ACA 8-21189)
Part No: Ther 19
Quantity: One
Remarks: 8-75850 provides for illumination of placard on caution panel if windshield vinyl overheats. Overheating will cause bubbles in windshield and necessitate replacement.
Limitation: Windshield rain clearing shall not be used on a dry windshield and for not more than 1 1/2 minutes when wet.

Description: Missile Launcher Rails (Ref. Dwg. #8-54990, Change "AJ")
Part No: 463054-113
Quantity: Six
Remarks: Model Spec. requirements do not require MG- 9 system components on TF-102A #1 and #2.
Limitation: No firing of missiles.

5. PART B (Cont)

Description: Missile Intervalometer installation (Ref. ACA 8-20435)
Part No: UN 120
Quantity: One
Limitation: Must be installed prior to firing missiles or opening doors in flight in the missile mode.

Description: Rocket intervalometer installation (Ref. Dwg. #8-66186)
Part No: UN 66-2
Quantity: One
Limitation: Must be installed prior to firing rockets or opening doors in flight in the rocket mode.

Description: Hydraulic System Relief Valve - addition of Thermal Venting (Ref. ACA 8-13450 and 8-531).
Part No: VA 981-1 Valve.
Quantity: Two
Remarks: In case of pump flow control malfunctioning, the hydraulic oil may heat up by working against the relief valve pressure. With this valve (VA 981-1) the relief valve will open at pre-determined oil temperature to protect the system.
Limitation: Land as soon as possible if primary or secondary system oil pressure indicator consistently shows above 3500 PSI.

Description: Lockout valves in AFCS (Ref. Dwg. 8-81045 and ACA 8-777)
Part No: a. CVAC VA 916, VA 916-1 (High Force Lockout Valves)
b. VA 1056 and VA 1056-1 (Low Force Lockout Valves) installed by ACA 8-777.
Quantity: One each
Remarks: With high force lockout valves, override force too large for satisfactory operation with AFCS.
Note: TVA 42745 on Dwg. 8-81045 removes lockout valves VA 916 and VA 916-1 to eliminate interference with servo actuator yoke. Interference causes excessive control system friction.
Limitation: Low force lockout valves (ACA 8-777) must be installed prior to or concurrent with installation of the AFCS.

5. PART B (Cont)

Description: Relief valve installation - mid-electronic compartment. (Ref. ACA 8-26372)
Part No: 8-89148 Valve Assembly
Quantity: One
Remarks: This relief is installed to control internal fuselage pressure in the nose wheel and forward electronic area.
Limitation: (1) This change must be incorporated before missile and/or rocket firing.
(2) Do not operate aircraft above 50,000 ft. with electronic equipment installed.

Description: Duct installation - intermediate electronic bay (Ref. ACA 8-20424)
Part No: 8-87795-3 Duct Assembly
Quantity: One
Limitation: Electronic equipment shall not be operated on the ground unless 8-87795-3 duct assembly is installed.

Description: Electronic Compartment - ground cooling (Ref. ACA 8-699, 8-20417, 8-20432 and 8-20433)
Part No: CVAC VA 931-2
Quantity: One
Remarks: Present system provides insufficient electronic ground cooling as revealed by flight test.
Limitation: Electronic equipment cannot be operated on ground during high ambient conditions (approximately 120°) until the above ACA's have been incorporated.

Description: Armament Launchers - operation of Ref. ACA 8-722 and ACA 8-20404)
Part No. & Quantity: CVAC VA 691-13 (2), VA 691-14 (4), 8-81211-7 (6), CY 223-5 (2), CY 223-6 (4), and Reg. 145-5 (1).
Limitation: Armament launchers must not be operated by the ship's system until the above ACA's have been incorporated. Inclusion of these also provides a fast acting system in compliance with the airplane specification.

Description: ACA 8-14914 wing attach bolts spar six - interim use of MS type.
Part No: MS 20010-34 (8 pieces per airplane)

5. PART B (Cont)

Remarks: Until a contractor designed bolt has received Air Force approval, MS bolts are acceptable with the following flight limitations.

Limitation: a. Symmetrical Maneuvers - Do not exceed normal load factor of 4.7g maximum.

b. Asymmetrical Maneuvers -

1. Do not exceed normal load factor of 3.1g maximum.
2. Roll rate limited to 100°/sec. for changes in angle of bank of 100°.
3. Aileron angle is restricted to ± 3.3° (1/2 throw) for all speeds above 420 knots calibrated airspeed for altitudes below 12,000 feet.

Description: Anti-icing - engine duct lips (Ref. ACA 8-20401 and TVA 39091 on Dwg. 8-87682)
Part No: CVAC VA 1072
Quantity: One
Remarks: Valve is replaced by a solid plug in duct valve by TVA 40578 "A" making anti-icing of engine duct lips inoperable.
Limitation: All weather operations should not be planned until valve VA 1072 is installed per ACA 8-13569.

Limitations on A/C 54-1351 due to instrumentation requirements are as follows:

Description: VHF Navigation Equipment. (Ref. TVA IN 43423 (A) against 8-99611.)
Remarks: C996/A VHF Navigation Control Panel removed - Space required for Programmer and Parameter Control Box installation.
Limitation: VHF Navigation Equipment inoperable.

Description: IFF Equipment. (Ref. TVA IN 40212 against 8-35001; TVA IN 42719 against 8-63111.)
Remarks: Lower DME/IFF Antenna removed. Single antenna operation could damage transmitter. Power to transmitter removed to prevent this.
Limitation: IFF Equipment inoperable.

5. PART B (Cont)

Description:	Instrument Panel Light (Ref. TVA IN 42570 against 8-63095).
Remarks:	Light Control Panel removed - space required for instrumentation Meter Panel.
Limitation:	Instrument Panel Light inoperable.
Description:	Pitot Heater . (Ref. TVA IN 38505 against 8-39050).
Remarks:	Production Nose Boom removed - replaced by Instrumentation Nose Boom.
Limitation:	No Pitot Heater installed.
Description:	Dimming Controls. (Ref. TVA IN 41460 against 8-60012 for Dwgs. 8-60810; 8-60851; 8-60852; 8-60854; 8-60855; 8-60880 and 8-63760.)
Remarks:	Left hand light control panel removed by TVA IN 42570 as per item 3 above.
Limitation:	No cockpit dimming.
Description:	Radar Pressurization System. (Ref. TVA IN 42845 against 8-35050.)
Remarks:	Lines capped at station 122 to eliminate interference with Instrumentation equipment.
Limitation:	Radar Pressurization System inoperable.

5. PART C

The following items are a complete list of specification conformance changes shown to be necessary as a result of development and flight test evaluation. These items are initial shortages to the airplane and until incorporated, the following limitations and/or discrepancies must be observed.

Description: Differential Linkage - Elevator System
Ref: ACA 8-500 8-20389
8-13626 8-20390
8-14624
8-20357
Remarks: Elevator controls are considered too sensitive.
Limitation: Precise flying in certain regimes difficult, thereby affecting Phase VI and VII evaluation.

Description: Elevator Stick Forces
Ref: ACA 8-700
Remarks: Stick forces are approximately 50% too high. A spring of lower rate will be incorporated in the elevator feel cylinder to reduce take-off and landing forces.
Limitation: None - more pilot effort to perform maneuvers.

Description: AFCS Syttem - Provision for.
Ref: ACA 8-11864 8-10935 8-834 8-734
8-20438 8-777 8-523 8-735
8-764 8-757 8-14486 8-10933
8-810 8-13802 8-14829 8-14197
8-15131 8-14577 8-15213 8-15080
8-15088
AND PITCH "G" LIMITING DEVICE
Remarks: At present there is no AFCS system installed. Major items not satisfactorily resolved was pitch limiting and follow up system and pitch attitude control.
Limitation: Fully automatic control not available

Dexcription: Pitch and Yaw Damper System
Ref: ACA 8-20438 8-777 8-13802 8-14486
8-764 8-757 8-810 8-14197
8-10933 8-834 8-734 8-14577
8-14829 8-11864 8-735 8-15213
8-15131 8-15088 8-15080 815
AND PITCH "G" LIMITING DEVICE
Remarks: The reliability and functions of the existing system is submarginal without incorporating the known improvements. Until a satisfactory Pitch "G" limiting system is developed , the following limitations listed below will still exist.
Limitation: Pitch Damper System shall not be used felow 15,000 feet, at speeds in excess of Mach 0.65.

5. PART C (Cont)

Description: Landing Gear Position and Warning Circuit
ECP 1020

Remarks: Present Landing Gear Warning System will operate at all altitudes. New system includes altitude and air speed switch and will operate warning system only when air speed is below 250 knots and altitude is less than 10,000 feet.

Limitation: None.

Description: Nose Wheel Well Curtains
Ref: ACA 8-696, 8-20421

Remarks: Existing curtains pulled loose at high landing speeds.

Limitation: Possible for snow, ice and debris to enter Nose Wheel Well until adequate curtains are installed

Description: Armament Control System
ACA 8-783 8-14709
8-766 8-15031
8-14772 8-15394

Remarks: Design improvement to relocate reset switches and remote control disconnect to L.H. wheel well and add door rocket grounding receptacle to reduce hazard for ground personnel. Also revising armament control system to prevent inadvertent and/or "Out-of-sequence" door and launcher operation. Make provision for testing and automatic dimming of missile mis-fire light.

Limitation: No mis-fire light dimming provision. Extra precautions should be taken by ground personnel to follow instructions issued.

Description: Two Second Chute Deployment
ACA 8-808

Remarks: Contractor working with chute vendor to provide a two-second deployment chute.

Limitation: None.

Description: Radome Anti-Ice System
ACA 8-13828

Remarks: Present Anti-Ice Distribution ring found inadequate in tests.

Limitation: Reduced radar capability during icing conditions

5. PART C (Cont)

Description: Air Conditioning - Ground Operation
ACA 8-689 8-14607 8-20432
8-14714 8-20419 8-20417
8-20418 8-20417 8-20433
8-699 8-688

Remarks: Insufficient air flow to cockpit when using ground air conditioning equipment. Addition of jet pump for cooling electronic equipment permits usage of refrigeration unit air for cooling cockpit.

Limitation: Uncomfortable cockpit during extended operation on the ground during extreme ambient conditions.

Description: Boundary Layer Bleed Duct - Manifolding
ACA 8-796 8-20444

Remarks: Vibration encountered at high speed when ram air valve is closed. Correction is accomplished by manifolding left and right hand boundary layer bleed ducts together to provide continuous flow.

Limitation: Possibility of vibration at speeds above 350 knots if ram air valve malfunctions or is intentionally closed during missile firing.

Description: Canopy De-Fog ECP 1001

Remarks: Stretched, tinted and electrically de-fogged glass not available, but corrective action provides for ship wiring to accommodate Nesa glass when available. ECP 1078 is an interim fix providing hot air canopy de-fog.

Limitation: Without one or the other fix installed, flight visibility under certain conditions is reduced.

Description: Speed Brake Effectiveness ACA 8-812

Remarks: It appears desirable to increase size of speed brakes for greater effectiveness.

Limitation: None.

Description: Launcher System Snubbing. ACA 8-648, 8-20411.

Remarks: It is possible to operate system by ground crew without snubbing pressure in the cylinder. Correction adds restrictor valves between selector valves and pressure switches.

Limitation: Until corrective action has been taken, mechanic must select correct valve position prior to pressurizing system.

Description: One second Armament Launcher Extension.
ACA 8-722, 8-20404.

Remarks: The present system installed gives four second extension. This change will reduce the extension time to one second.

Limitation: Reduced "Kill Probability".

5. PART C (Cont)

Description: Nose Landing Gear Door Cylinder. ACA 8-797, 8-747, 8-20445, 8-20446

Remarks: Uplock mechanism design recently discovered to be marginal. Failure to lock in up position may occur after relatively short service life. New cylinder design corrects this deficiency.

Limitation: None. If cylinder fails to uplock, unsafe gear warning light will notify pilot.

Description: Improved Fuel System. Ref: ACA 8-708, 8-795, 8-14835, 8-14944, 8-14945, 8-15003, 8-14765, 8-15174, 8-20443.

Remarks: Provides fuel flow joiner in tank to engine fuel system to equalize the flow quantity-wise. This insures equal depletion from both sides and eliminates present necessity of pilot to maintain lateral balance with boost pump switch control. Also, provides twin boost pump installation to pick up fuel in all attitudes of flight, thus decreasing amount of unusable fuel.

Limitation: Until accomplished, pilot must monitor fuel quantity to maintain equal distribution. Also, until twin boost pumps are installed, alternate dives and climbs and similar maneuvers with low fuel quantity is restricted as provided for in handbooks.

Description: Fuel Tank Negative "G" Vent Valve Ref: ACA 8-707, 8-20441

Remarks: At present fuel will tend to vent overboard during maneuvers of less than one "g" positive. This is considered undesirable, especially if armament is fired at same time.

Limitation: None. Until accomplished, solenoid valve is presently installed which shuts off fuel vent valve when missile bay doors are opened.

Description: Articulated Engine Inlet Fuel Line ACA 8-738

Remarks: An additional flexible coupling in the fuselage-engine fuel line is considered desirable by the operating agency as a result of the CTCI Board.

Limitation: None.

5. PART C (Cont)

Description: J-57 Engine Installation. Ref. ECP's 1002, 1014, 1031, ACA 8-640, 8-14236NF, 8-479, 8-14611, 8-851, 8-14097, 8-14124, 8-14150, 8-14194, 8-751A, 8-14161, ECP 1068.

Remarks: Customer request. Contractor to install P-23 type engine in certain aircraft of which 54-1351 (8-12 #1) is one, and in addition incorporate Pratt & Whitney changes for better performance and maintenance.

Limitation: P-41 engines not sufficient to perform Phase VI and VII testing.

Description: Roll Rate Limiter. ACA 8-754, 8-15189, 8-15173, 8-15058, 8-15184, 8-15168, 8-20442.

Remarks: This change provides a warning to the Pilot when he excedes a dangerous roll rate by applying high lateral stick forces to return stick to neutral.

Limitation: Roll rate is limited to 100°/sec. for changes in angle of bank of 100°.

Description: Trim Servo System. Ref. ACA 8-740, 8-12364, 8-15124, 8-484, 8-20333, 8-20334, 8-20335, 8-20336.

Remarks: Without Trim Servo System, a stable stick force gradient is not available and no pitch trim compensation is provided when speed brakes are operated.

Limitation: None. Airplane difficult to fly on manual or direct manual mode.

6. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 31 October 1955.

7. List of items not proven to be interchangeable or replaceable on this airplane at time of final acceptance on 31 October 1955.

Description	Part No.
Radome	8-75401-5
Canopy Struc.	8-75800-1
Canopy Glass	8-75802-1 8-75803-3 8-75803-4
Radar Access Doors	8-75600-1 8-75600-2
Missile Bay Doors	8-56500-1 8-56500-3 8-56501-3 8-56501-4
Wing Tips	8-17900-9 8-17900-10
Leading Edges	8-17230-27 8-17230-28 thru 8-17230-36
M. L. G. Fairing	8-44533-71
Elevon Fairing	8-44533-71 8-44533-72 8-17560-11 8-17560-12 8-17560-15 8-17560-16 8-17560-49 8-17560-50

ZA-8-050

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-050
DATE 21 Dec 1955
MODEL TF-102A

TITLE

REPORT NO. ZD-8-050
DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF TF-102A AIRPLANE AF S/N 54-1352

CONTRACT AF33(600)-23903

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES 11

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
A	12-21-55	WMG	Corrections and Changes	All

FORM 1812A-4

This report is prepared to define the condition of the aircraft as of factory completion for final acceptance by the Air Force.

PART I:

The following items are deviations from contractual requirements for Model TF-102A Airplane, AF Serial No. 54-1352.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 8 December 1955, are as follows:

ECP No. (CAC-F102-)	Title
507	Center of Gravity Location - Correction of:
1010	M.L.G. Skewed Axis - Change to:
1020	Landing Gear Warning System - Positive Warning
1022	Elevator - Change from 10° to 8° Down Surface Travel
1087	Constant Speed Drive Oil System - Revision of

2. Engineering data listed in Exhibits and Tables of the contact which were required to be submitted prior to 9 December 1955, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

TABLE I, PART B Para 2. Stress Analysis

Report No.	Title	Anticipated Date of Submittal
ZS-8-060	Wing & Elevon Loads	8-1-56
ZS-8-061	Fin & Rudder Loads	8-1-56
ZS-8-062	Fuselage Loads	7-1-56
ZS-8-063	Control System Loads	8-1-56
ZS-8-064	Armament Loads	10-1-56
ZS-8-065	Wing & Elevon Analysis	10-1-56
ZS-8-066	Fin & Rudder Analysis	10-1-56
ZS-8-067	Fuselage Analysis	10-1-56
ZS-8-037	Fuselage Analysis	10-1-56
ZS-8-068	Control System Analysis	12-1-56
ZS-8-038	Control System Analysis	12-1-56
ZS-8-069	Armament Analysis	10-1-56
166S Supp.#2	Nose Gear Analysis	8-1-56
165S	Main Gear Analysis	8-1-56

TABLE I, PART B Para. 3

Actual Weight & Balance Report to be submitted approximately December 22, 1955.

2.
(Cont.)

EXHIBIT "1" Para. 1.a (1) Flight Handbook

In accordance with AMC Regulation 5-21 contractor is supplying preliminary utility Flight Handbooks to be replaced with regular Flight Handbooks in April 1956.

3. Equipment listed in the "Equipment Approval Status Record", Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 15 November 1955.

4. PART A The following are shortages at time of factory completion. It is anticipated that these items will be reflected in the Air Force form 263, Part II.
(EPD) Expected Parts Delivery Date.

Quantity	Description	Part No.
1	Potentiometer Installation Installation 8-49876 (EPD 2-1-56)	UN 110-2
2	Control Stick Grip Assembly Installation 8-48502 Installed By H.A.C.	GRIP 12
Noted	Armament Launchers Instl. ACA 8-722 & 8-20404 (EPD 12-15-55)	(2 Ea) VA 691-13 (4 Ea) VA 691-14
3	Missile Launcher Door Syst. Instl. ACA 8-648 & 8-20411 (EPD 12-14-55)	VA 891-17
1	Fuel Flow Joiner Instl. ACA 8-708 (EPD 3-2-56)	REG 150-3
1 Ea	Armament Control System Instl. ACA 8-766 & Others (EPD 12-30-55)	LI 320 Box 166-2
1 Ea	Twin Fuel Boost Pumps Instl. ACA 8-795 & Others (EPD 12-15-55)	8-21503-1,2 8-21517-1,2

4. PART A (Cont.)	Quantity	Description	Part No.
	1	Electronic Cooling Syst. Instl. ACA 8-669 & Others (EPD 12-23-55)	VA 931-2
	1	Missile Intervalometer Instl. ACA 8-20435 (EPD 3-1-56)	UN 120
	1	Rocket Intervalometer Instl. Dwg. 8-66186 (EPD 1-2-56)	UN 66-2
	8	Wing Spar Fuselage Attach Bolts Instl. 8-10030, Sht 1, Chg H (EPD Pending A.F. Approval)	MS 20010-34
	1 Ea	Constant Speed Drive Oil Syst. Instl. ACA 8-15401 (EPD 1-5-56, FI 23-5) (EPD 2-15-56, GFAE PART)	FI 23-5 GFAE 660599
	2 Ea	Radome Anti-Icing Syst. Instl. ACA 8-13828 (EPD 12-21-55)	RI 225 8-38596-1

4. PART B Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or the intended usage.

Description: Armament Launchers - Operation (Ref. ACA 8-722, ACA 8-20404 and Dwg. 8-80360)

Part No. & Quantity: CVAC VA 691-13 (2), VA 691-14 (4), and 8-81311-7 (6).

Limitation: Armament Launchers must not be operated by the ship's system until the above ACA's have been incorporated. Inclusion of these also provides a fast acting system in compliance with the airplane specification.

Description: Elevon Actuator Rod Eng Attachment - Revision to (Rev. ACA 8-649 Amend)

4. PART B (Cont.)

Remarks: This ACA increases length of bushings and chrome plates and attaching bolt to prevent galling action between the elevon actuator rod end bearing inner race and the attaching bolt.

Limitation: Elevon actuator bearings should be lubricated after every 5 flight hours and rod end bearings inspected after every 10 hours of flight.

Description: Hydraulic System Relief Valve - Addition of Thermal Venting. (Ref. ACA 8-531 and ACA 8-13450)

Part No: VA 981-1 Valve

Quantity: Two

Remarks: In case of pump flow control malfunctioning, the hydraulic oil may heat up by working against the relief valve pressure. With this valve (VA 981-1) the relief valve will open at pre-determined oil temperature to protect the system.

Limitation: Land as soon as possible if primary or secondary system oil pressure indicator consistently shows above 3500 PSI.

Description: Electrical Receptacle, Forward Fuel Cell-Revision of (Ref. ACA 8-617)

Remarks: Provides seal at forward fuel cell electrical receptacle.

Limitation: Must be accomplished before missile and/or rocket firing to prevent missile dust from entering area between wing and fuselage, thus causing corrosion.

Description: Missile Door and Launcher System Snubbing (Ref. ACA 8-648) and ACA 8-20411)

Part No: CVAC VA 891-17 Valve

Quantity: Three

Remarks: It is possible to operate system by ground crew without snubbing pressure in the cylinder. Correction adds restrictor valves between selector valves and pressure switches.

4. PART B (Cont.)

Limitation: Until corrective action has been taken, mechanic must select the switch position in the nose wheel well corresponding to the position the doors or launchers are presently in and then wait 30 seconds before operating to the desired position.

Description: Fuel Flow Joiner (Ref. ACA 8-708)

Part No: CVAC REG 150-3

Quantity: One

Remarks: Provides fuel flow joiner in tank to engine fuel system to equalize the flow quantity-wise. This insures equal depletion from both sides and eliminates present necessity of pilot to maintain lateral balance with boost pump switch control.

Limitation: Until accomplished, pilot must monitor fuel quantity to maintain equal distribution.

Description: Armament Control System - Revision of (Ref. ACA 8-766, 8-783, 8-14772, 8-15394 and 8-20440)

Part No: CVAC #SW 297-1, LI 320, Box 166-2

Quantity: One each

Remarks:

1. Adds door rocket grounding receptacle for grounding ignitors while loading rockets.
2. Adds relay box, door switches and launcher switches; all of which are required for armament re-set system to prevent inadvertent and/or out of sequence door and launcher operation.
3. Replaces mis-fire light with one that can be tested and dimmed.

Limitation:

1. Ignitors must be grounded while loading rockets.
2. Before applying power to the armament system, the pre-operating procedure as outlined in safety supplement of report ZM-8-125 must be followed.
3. Missile mis-fire light cannot be tested.

4. PART B (Cont.)

Description: Wing Spar Fuselage Attach. Bolts.

Remarks: Temporary load factor limitations as a result of installation of P/N MS 20010-34 wing spar fuselage attach. bolts (wing spar No. 6) until optimum bolt is approved.

Limitation: The airplane is temporarily limited to the following:

Symmetrical Maneuvers

1. Normal load factor + 4.7g max.

Asymmetrical Maneuvers

1. Normal load factor + 3.1g max.
2. Roll rate limited to 100°/sec. for changes in angle of bank of 100°.
3. Aileron angle is restricted to ± 3.3° (1/2 throw) for all speeds above 420 knots calibrated airspeed for altitudes below 12,000 feet.

Description: Constant Speed Drive - Oil System for (Ref. ACA 8-15401)

Part No: CVAC FI 23-5 and GFAE #660599

Quantity: One each

Limitation: Until ACA 8-15401 is accomplished, zero or negative "G" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "G" conditions and lack of A.C. Power may occur.

Description: Radome Anti-Ice System ACA 8-13828

Remarks: Present Anti-Ice distribution ring found inadequate in tests.

Limitation: Reduced radar capability during icing conditions.

4. PART B (Cont'd)

Description: Electrical Receptacle, Forward Fuel Cell-Revision of (Ref. ACA 8-617)
Remarks: Provides seal at forward fuel cell electrical receptacle.
Limitation: Must be accomplished before missile and/or rocket firing to prevent missile dust from entering area between wing and fuselage, thus causing corrosion.

Description: Missile Door and Launcher System Snubbing (Ref. ACA 8-648) and ACA 8-20411)
Part No: CVAC VA 891-17 Valve
Quantity: Three
Remarks: It is possible to operate system by ground crew without snubbing pressure in the cylinder. Correction adds restrictor valves between selector valves and pressure switches.
Limitation: Until corrective action has been taken, mechanic must select the switch position in the nose wheel well corresponding to the position the doors or launchers are presently in and then wait 30 seconds before operating to the desired position.

Description: Fuel Flow Joiner (Ref. ACA 8-708)
Part No: CVAC REG 150-3
Quantity: One
Remarks: Provides fuel flow joiner in tank to engine fuel system to equalize the flow quantity-wise. This insures equal depletion from both sides and eliminates present necessity of pilot to maintain lateral balance with boost pump switch control.
Limitation: Until accomplished, pilot must monitor fuel quantity to maintain equal distribution.

Description: Armament Control System - Revision of (Ref. ACA 8-766, 8-783, 8-14772, 8-15394 and 8-20440)
Part No: CVAC #SW 297-1, LI 320, Box 166-2
Quantity: One each
Remarks:

1. Adds door rocket grounding receptacle for grounding ignitors while loading rockets.
2. Adds relay box, door switches and launcher switches; all of which are required for armament re-set system to prevent inadvertent and/or out of sequence door and launcher operation.
3. Replaces mis-fire light with one that can be tested and dimmed.

Limitation:

1. Ignitors must be grounded while loading rockets.
2. Before applying power to the armament system, the pre-operating procedure as outlined in safety supplement of report ZM-8-125 must be followed.
3. Missile mis-fire light cannot be tested.

4. PART B (Cont'd)

Description: Twin Boost Pump Installation - Wing Fuel System Ref. ACA 8-795 8-15737
8-14835 8-15174
8-15063 8-15270
8-14765 8-20443
8-15109 8-21549
Part No: 8-21503-1, -2 and 8-21517-1, -2
Quantity: One each
Remarks: Provides boost pumps which will pick up fuel during all attitudes of flight and decreases amount of unusable fuel.
Limitation: Until accomplished, alternate dives and climbs and similar maneuvers with low fuel quantity is restricted.

Description: Electronic Compartment Ground Cooling - Revision of (Ref. ACA 8-699 8-20433
8-14607 8-21547
8-14714
8-20417
8-20432
Part No: CVAC VA 931-2
Quantity: One
Remarks: Present system provides insufficient electronic ground cooling as revealed by flight test.
Limitation: Electronic equipment cannot be operated on ground during high ambient conditions (approximately 120°) until the above ACA's have been incorporated.

Description: Missile Intervalometer Installation (Ref. ACA 8-20435)
Part No: UN 120
Quantity: One
Limitation: Must be installed prior to firing missiles or opening doors in flight in the missile mode.

Description: Rocket Intervalometer Installation (Ref. Dwg. #8-66186)
Part No: UN 66-2
Quantity: One
Limitation: Must be installed prior to firing rockets or opening doors in flight in the rocket mode.

4. PART B (Cont'd)

Description: Automatic Flight Control System
(Ref: ACA 8-11864, 8-523, 8-734, 8-735, 8-757, 8-777, 8-810, 8-886, 8-14197, 8-15088, 8-15131, 8-15213, 8-15591, 8-754, 8-15173, 8-15058, 8-15168, 8-14887, 8-15071, 8-884

Part No:

1. Suitable Pitch "G" Limiter
2. Suitable roll coupling limiting device (Ref. ACA 8-754 and ACA 8-884)
3. Elevator Limit Switches (Ref. ACA 8-735)
4. Aileron Limit Switches (Ref. ACA 8-734)
5. CVAC # POTE 17-8-1 (Ref. ACA 8-11864)
6. Low Force Lock-out Valves. CVAC #VA 1056 and VA 1056-1 (Ref. ACA 8-777)

Limitation: Above items 3,4 and 5 must be installed prior to or concurrent with activation of the automatic flight control system. Until items 1 and 2 are installed, AFCS will be used only within the aileron limit switch settings and flight regimes specified in DC-8-340, and the following elevator limit switch settings: ± 2.3° above 15,000 Ft. or below M=0.6; ± 1.0° above M=0.6 at altitudes below 15,000 Ft. Until item 6 is installed, forces required for, and surface transients resulting from, the AFCS manual over-ride feature are excessive. Manual over-ride should be attempted only as a last resort.
Note: Items 3 and 4 will be superceded by Items 1 and 2.

Description: Pitch and Yaw Damper System
(Ref. ACA 8-734, 8-735, 8-757, 8-777, 8-810, 8-886, 8-14197, 8-15088, 8-15131, 8-15213, 8-15591

Part No: Pitch Limiting Device

Limitation: Pitch Damper System shall not be used below 12,000 Ft. at speeds in excess of 420 Knots I.A.S. until a pitch limiting device is installed.

4. PART B (Cont'd) Limitations on A/C 54-1352 due to instrumentation requirements are as follows:

Description: VHF Navigation Equipment - Control Panel Deletion (Ref. TVA IN 41714 against 8-99611)
Remarks: C996/A VHF Navigation Control Panel removed to provide space for programmer and parameter control box installation.
Limitation: VHF navigation equipment inoperable.

Description: Missile Launchers - Removal of
(Ref. TVA IN 40881 against 8-54990
TVA IN 44843 against 8-80411
TVA IN 42834 against 8-60012
TVA IN 38400 against 8-60800
Remarks: Missile Launchers removed from aft missile bays (left, right and center) to provide room for instrumentation equipment.
Limitation: Armament equipment inoperable in aft bays only.

4. PART C Work tasks not accomplished on this airplane at time of final delivery shall be referenced in the Air Force form 263C Part VI.

5. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 21 December 1955.

6. List of items not proven to be interchangeable on this airplane at time of final acceptance on 21 December 1955:

Rudder Nose Door	8-15016-39 8-15016-41 8-15016-43
Wing Leading Edge Panel Assy	8-17230-27 8-17230-28 8-17230-29 8-17230-30 8-17230-31 8-17230-32 8-17230-33 8-17230-34 8-17230-35 8-17230-36
Wing Leading Edge Assy	8-17232-1 8-17232-2
Wing Leading Edge Assy	8-17233-1 8-17233-2
Wing Leading Edge Assy	8-17234-1 8-17234-2
Wing Leading Edge Assy	8-17235-1 8-17235-2
Wing Leading Edge Assy	8-17236-1 8-17236-2
Wing Tip Assy	8-17900-9 8-17900-10
Tailcone Assy	8-73490
Speed Brake Door Assy	8-73614-3 8-73614-4
Nose Radome Assy	8-75401-1
ATM Door Assy	8-75550-27
Pilots Canopy Assy	8-75800-1
Canopy Upper Transparent Panel Assy	8-75802-3
Canopy Lower Transparent Panel Assy	8-75803-6 8-75803-5

Z.D. 8-020

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-020
DATE 30 June 1955
MODEL F-102A

TITLE
REPORT NO. ZD-8-020
DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANE AF S/N 53-1791

CONTRACT AF33(600)-5942

PREPARED BY ____________________

GROUP Project Specifications

REFERENCE ____________________

CHECKED BY ____________________

APPROVED BY ____________________

NO. OF PAGES ____________

NO. OF DIAGRAMS ____________

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

FORM 1812 A-4

This preliminary report is prepared to define the condition of the aircraft as of factory completion. This report shall be revised to reflect the exact configuration as of the time of final acceptance.

PART I:

The following items are deviations from contractural requirements for Model F-102A Airplane, AF Serial No. 53-1791.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 30 June 1955, are as follows:

ECP No. (CAC-F102-)	Title
233	Finish Requirements - Change of:
1006	Oxygen Filler Valve - Change of:

2. List of required flight tests, Report No. ZC-8-117, revised 4 February 1955, that have not been accomplished on any airplane as of 30 June 1955.

3. Engineering data listed in exhibit of the contract which were required to be submitted prior to 30 June 1955, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the con tract exhibit):

Exhibit "A"

Para.	
(b)	Stress Analysis
(c)	Actual Weight and Balance Report
(g)	(2) Handbook Flight Operating Instructions
(g)	Structural Repair Instructions
(g)	Illustrated Parts Breakdown
(g)	Inspection Requirements

4. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-091 dated 19 February 1954, Revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 30 June 1955.

5. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have not been approved as of 30 June 1955.

6. PART A Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpeted to mean the flight test assignment set forth in CCN No. 5N-4375 (159) dtd 7 April 1955.

Description: Pilot Assist
Part No: UN 100, UN 36-38 POTE 103-1
Qty: 1 Each
Remarks: Pilot Assist System shall not be used unless above items are installed.

Description: Trim Servo and Speed Brake
Part No: UN 110-1, UN 110-2, UN 110-3, UN 110-4
Qty: 1 Each
Remarks: There will be no automatic elevator deflection to compensate for pitching effect from speed brake extension.

There will be no automatic trim for unstable stick forces until above units are installed.

Description: Valve - Rain Clearing System
Part No: VA 931-1
Qty: 1
Remarks: Rain clearing provisions are capped off until suitable valve CVAC #VA 931-1 is available.

Description: Rain Clearing, Overheating of Windshield
Part No: UN 108, THER 19
Qty: 1 Each
Remarks: Rain clearing ducts presently deactivated by omission of VA 931-1 (Item 4). However, when VA 931-1 is installed, the following limitations shall exist until thermistor indicator is installed. Rain clearing shall not be used on a dry windshield, and for not more than (1 1/2) minutes on a wet windshield.

6. PART A (Cont) The following limitation, though not due to parts shortage, should also be noted.

Description: Change material of skin. Fuselage Sta. 443.3 to 481.7 Upper side. ACA 8-12881.

Remarks: Without this change incorporated, the airplane shall be limited to the following:

1. Aileron Deflection:
    - (A) Aileron Angle = 7.2° Max. above 12,000 feet.
    - (B) Aileron Angle = 5.0° Max. below 12,000 feet and above 480 knots calibrated.
2. Maximum roll rate of 100°/second for not more than 90° bank.
3. 4 g. Maximum Symmetrical load factor for roll maneuvers.

Description: Electrical System Constant Speed Drive, Oil System For

Part No: 8-20503

Qty: 1

Remarks: Zero or negative "G" maneuvers shall be limited to a maximum duration of (3) seconds until a satisfactory oil system is designed. Maneuvers in excess of that mentioned above will not supply oil to the unit during zero or negative "G" maneuvers.

7. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 30 June 1955.

C O N V A I R
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-020
DATE 30 June 1955
MODEL F-102A

TITLE

REPORT NO. ZD-8-020
DOCUMENTATION FOR WAIVERS
FROM CONTRACTUAL REQUIREMENTS
FOR ACCEPTANCE OF
F-102A AIRPLANE AF S/N 53-1791

CONTRACT AF33(600)-5942

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
A	1-2-57	DDF	Revised and Rewritten	All

FORM 1812 A-4

PART I:

The following items are deviations from contractural requirements for Model F-102A Airplane, AF Serial No. 53-1791.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 2 January 1957, are as follows:

ECP No. (CAC-F102-)	Title
(NONE)	

2. Engineering data listed in exhibit of the contract which were required to be submitted prior to 2 January 1957, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract exhibit):

(NONE)

3. PART A

Shortages as listed in Department of Defense Form DD-250, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or intended usage.

(Reference Department of Defense Form DD-250)

3. PART B

Shortages as listed in Department of Defense Form DD-781, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment.

The shortages and limitations on the subject airplane have been reviewed. Until the items noted herein have been cleared, the following restrictions and limitations should be indicated on DD Form 781 and/or in the required Service Handbooks where applicable. These limitations should be observed in addition to those already published in the Flight Handbook.

3. PART B (Cont)

NOTE: This airplane has been under an accelerated flight test program by the Contractor. Since it is anticipated that the customer will bail the aircraft back to the Contractor for modification to incorporate the F-106A ARDC instrument display, the Specification Conformance Changes (Report ZM-8-162) have not been accomplished except where necessary. Restrictions due to this unaccomplished task are identified by an asterisk (*).

1. Description: Speed and Symmetrical Load Factor Limitations

   Limitation: Limit Dive Speed except

   a. Maximum of 600 knots IAS below 5,000 feet (Replacement of Heli-coil insert in engine inlet duct with a satisfactory fastener - ACA 8-1443)

   b. Symmetrical normal load factor is +5.6 g to -2.4g except at speeds in excess of 480 knots IAS below 12,000 feet where the load factor is +5.6 g to -1.4 g (pending completion of flight loads program.)

2. Description: Roll Maneuver and Asymmetric Load Factor Limitations

   Limitations: a. Flight region above 12,000 feet, or below 12,000 feet, and 480 knots IAS.

   (1) No roll rate restrictions for positive quadrant rolls (90° either side of level flight).

   (2) Without side-slip feedback operative, do not exceed 80° per second for 360° rolls.

   (3) With side-slip feedback operative, do not exceed 120° per second for 360° rolls. (Side-slip feedback not presently installed.)

3. PART B (Cont)

(4) Uncoordinated maneuvers are prohibited.

b. For flight regions above 480 knots IAS and below 12,000 feet, the above restrictions apply, except that in addition, 1/2 aileron shall not be exceeded with normal load factor restriction: 0 to 3.75 g.

3. Description: Rudder Pedal Forces

Limitation: Excessive rudder induced maneuvers should be avoided except in the landing configuration, (Intent: to not exceed 144 pounds pedal force) pending completion of flight loads program.

*4. Description: Trim Servo System

Remarks: Low level operation, which might prove hazardous in the event of a malfunction, is restricted until service familiarity and IDE approval of system components is obtained.

Limitation: Do not operate trim servo at altitudes less than 5,000 feet above the terrain.

*5. Description: Pitch and Yaw Damper Operation

Remarks: Reliability and functions of the existing system is submarginal without incorporating the Specification Conformance Changes.

Limitation: a. No operation of pitch and yaw damper system until after completion of ACA 8-17125 (Reversal of pins to side slip transducer).

b. After completion of a. above, pitch damper system shall not be used below 5,000 feet at speeds in excess of Mach 0.95 pending completion of flight tests.

3. PART B (Cont)

*6. Description: Pilot Assist System

Remarks: T.O. 1F-102-527 dated 26 April 1956 deactivates Pilot Assist.

Limitation: Fully automatic control not available.

*7. Description: Constant Speed Drive - Oil System for (Ref. ECP 1129, 1196, 1203, and ACA 8-1080)

Limitation: Zero or negative "g" maneuvers shall be limited to three seconds. Maneuvers in excess of this will not supply oil to the unit during zero or negative "g" conditions and lack of AC power may occur.

*8. Description: Thermal Venting Relief Valve - Installation of (Ref. ACA 8-531, 8-13449, 8-16188NF)

Remarks: In case of pump flow control malfunctioning the hydraulic oil may heat up by working against the relief valve pressure. With this valve (VA 981-1) the relief valve will open at predetermined oil temperature to protect the system.

Limitation: Land as soon as possible if primary or secondary system oil pressure indicator consistently shows above 3500 psi.

*9. Description: Relief Valve Installation - Mid Electronics Comp't (Ref. ACA 8-716)

Remarks: Relief Valve is installed to control internal fuselage pressure in the nose wheel well and forward electronic area.

Limitation: Do not operate Altitude FT above 50,000 feet with electronic equipment installed.

3. PART B (Cont)

*10. Description: Improved Fuel System

Remarks: Provides fuel flow joiner in tank to engine fuel system to equalize the flow quantity-wise. This insures equal depletion from both sides and eliminates present necessity of pilot to maintain lateral balance with boost pump switch control. Also, provides twin boost pump installation to pick up fuel in all attitudes of flight, thus decreasing the amount of unusable fuel.

Limitation: Until accomplished, pilot must monitor fuel quantity to maintain equal distribution. Also, until twin boost pumps are installed, alternate dives and climbs and similar maneuvers with low fuel quantity is restricted as provided for in Handbooks.

*11. Description Windshield Anti-Ice Circuit - Add transformers, revise wire gauges and circuits. (Ref. ACA 8-653, 8-15496, 8-14511, 8-17331)

Part No. CVAC TRA 294

Quantity: Two

Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep the windshield free of ice.

Limitation: The airplane should not be flown in icing conditions until the above ACA's have been incorporated. Also, de-fog cannot be provided under extreme conditions.

*12. Description: Anti-Icing - Engine Duct Lips (Ref. ACA 8-13569)

Remarks: Valve is replaced by solid plug (TVA 40578) in duct valve making anti-icing of engine duct lips inoperative.

Limitation: All weather operations should not be planned until VA 1072 in installed per ACA 8-13569.

3. PART B (Cont)

*13. Description: Radome Anti-Ice System (Ref. ACA 8-13828 and 8-13533)

Remarks: Present anti-ice distribution ring found inadequate in tests and circuit change is necessary to prevent grounding of all anti-ice systems.

Limitation: Airplane should not be flown in icing conditions.

*14. Description: Rain Clearing System

Remarks: Hot air blast shield protects vinyl edge of windshield. (Ref. ACA 8-18196)

Limitation: Rain clearing should not be operated until ACA 8-18196 is incorporated. (TVA 40584 deactivates system until VA 931-1 is installed. Ref. ACA 8-13469 and 8-15321)

*15. Description: Canopy De-Fog System (Ref. ECP 1076)

Remarks: Hot air de-fog system is not incorporated.

Limitation: Flight visibility under certain flight conditions is reduced.

*16. Description: Armament System

Remarks: Production and Specification Conformance Changes not accomplished as armament operation was not required for test program. Changes scheduled for test to tactical modification. Missile bays used for instrumentation equipment.

Limitation: No armament firing or opening of missile bay doors in flight.

3. PART B (Cont)

*17. Description: Electronic Compartment - Ground Cooling of

Remarks: Until incorporation of the Specification Conformance Changes the present system will not provide adequate ground cooling. TVA 38104B deactivates the system until incorporation of ACA 8-1006 and 8-18320 so that the ducts are protected from high pressure and temperature if the throttle is rapidly retarded.

Limitation: Electronic equipment should not be operated on the ground unless connected to ground cooling cart.

*18. Description: Oxygen Duration

Remarks: Oxygen quantity should be observed until the capacity is increased by the addition of one bottle to the present system (ECP 1065) or the liquid oxygen supply system is installed (ECP 1057).

Limitation: Oxygen quantity should be checked periodically during flight.

*19. Description: Canopy Cinch-Down Actuating Mechanism - All Weather Protection.

Remarks: With all-weather seal installed on canopy, air spring counter-balance is revised to provide a pull-down force sufficiently to compress the seal and latch the canopy.

Limitation: Parked aircraft in rain must be protected against water leakage into cockpit.

3. PART C

Work tasks not accomplished on this airplane at time of final delivery shall be referenced in the Department of Defense Form DD-250, Shipment Order No. 747, consisting of 127 pages.

GV
CONVAIR

ZD.8-021

6A

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-021
DATE 31 July 1955
MODEL F-102A

TITLE

REPORT NO. ZD-8-021
DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANE AF S/N 53-1792
CONTRACT AF33(600)-5942

PREPARED BY
GROUP Project Specifications
REFERENCE
CHECKED BY
APPROVED BY

NO. OF PAGES
NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

FORM 1812 A-4

This report is prepared to define the condition of the aircraft as of final Air Force acceptance on 31 July 1955. This report supersedes the preliminary report No. ZD-8-021 Dated 7 July 1955.

PART I:

The following items are deviations from contractural requirements for Model F-102A Airplane, AF Serial No. 53-1792.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 31 July 1955, are as follows:

ECP No. (CAC-F102-)	Title
233	Finish Requirements - Change of:
1069	Negative "G" Valve - Deletion of:

2. List of required flight tests, Report No. ZC-8-117, revised 4 February 1955, that have not been accomplished on any airplane as of 31 July 1955.

3. Engineering data listed in exhibit of the contract which were required to be summitted prior to 31 July 1955, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract exhibit):

Exhibit "A"

Para. (b) Stress Analysis
(c) Actual Weight and Balance Report
(g) Utility Flight Handbook

4. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-091 dated 19 February 1954, Revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 31 July 1955.

5. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have not been approved as of 31 July 1955.

6. PART A Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted.

1. Description: Power Transformers (For NESA Glass Anti-Ice & Defog Systems)
   Part No.: TRA 294
   Qty: Two Each
   Remarks: Under icing conditions the present system will not satisfactorily anti-ice. Under extreme conditions the defog may not be adequate.

2. Description: Windshield Overheat Warning System
   Part No.: Therm 19, UN 108
   Qty: One Each
   Remarks: This installation provides a warning system to indicate overheat of vinyl portions of windshield. Windshield rain clearing shall not be used on a dry windshield and for not more than 1 1/2 min when wet.

3. Description: Pilot Assist Installation
   Part No.: UN 100, UN 36-28, POTE 103-1
   Qty: One Each UN 100 & UN 36-28 & 2 POTE 103-1
   Remarks: Pilot assist system is inoperable until the above items are installed.

4. Description: Trim Servo & Speed Brake
   Part No.: UN 110-1, UN 110-2, UN 110-3, UN 110-5
   Qty: One Each
   Remarks: Until the above items are installed the pilot must manually compensate for unstable stick forces (Pitching) when the speed brakes are actuated.

5. Description: Missile Intervalometer
   Part No.: UN 120 Intervalometer
   Qty: One
   Remarks: Part must be installed prior to firing more than one missile at a time.

6. Description: Rocket Intervalometer
   Part No.: UN 66-2
   Qty: One
   Remarks: Part Number UN 66-1 has been installed in lieu of shortage part UN 66-2. UN 66-1 is designed for 14 volt operation, therefore the system may not be operated on emergency D.C. power.

6. PART A
(Cont)

7. Description: Pitch Damper System
Part No.: UN 100
Qty: One
Remarks: Pitch damper system shall not be used below 15,000 ft. until the above unit is installed.

8. Description: Oil System - For Constant Speed Drive
Part No.: 8-20503
Qty: One Each
Remarks: Zero or negative "G" maneuvers shall be limited to three (3) seconds. Until the above system is installed, maneuver in excess of that mentioned will cause oil starvation in the unit.

9. Description: Rain Clearing Installation
Part No.: VA 931-1 (VALVE)
Qty: One
Remarks: Valve is replaced by a solid plug in duct valve rendering the system inoperable. Until the above noted valve is installed, all-weather operation should not be planned.

10. Description: Anti-Icing Valve (Engine Duct Lips)
Part No.: VA 707-1
Qty: One
Remarks: Valve is replaced by a solid plug in duct valve rendering the system inoperable. Until the above noted valve is installed, all-weather operation should not be planned.

11. Description: Hole Cover (Removed Equipment - B.L. 39.25 Sta. 295.00 Missile Bay)
Part No.: 8-17976
Qty: One
Remarks: Wing anti-icing duct was removed which created an opening from the wing leading edge area to the missile bay. This opening allows rocket and missile dust to enter, causing corrosion. Until above part is installed, rocket & missile firing is prohibited.

6. PART A
(Cont)

12. Description: Vertical Fin Tip
Part No.: 8-14520
Qty: One
Remarks: Due to a vendor shortage, the required fin tip could not be installed. The limitations are concerned with the antenna response which is below standard for a tactical airplane. The substituted YF-102 fin tip does not meet the configuration standards of the F-102A but is a suitable substitute until the shortage fin tip is installed.

6. PART A
(Cont)

The following limitation, though not due to parts shortage, should also be noted.

1. Description: Change material of skin. Fuselage Sta. 443.3 to 481.7 Upper side. ACA 8-12881.

   Remarks: Without this change incorporated, the airplane shall be limited to the following:

   1. Aileron Deflection:

      (A) Aileron Angle = 7.2° Max. above 12,000 feet.

      (B) Aileron Angle = 5.0° Max. below 12,000 feet and above 480 knots calibrated.

   2. Maximum roll rate of 100°/second for not more than 90° bank.

   3. 4g. Maximum Symmetrical load factor for roll maneuvers.

2. Description: Mid-Electronics Door (Data link antenna Installation)

   Remarks: A satisfactory UHF Data Link Antenna has not been developed for incorporation in the mid-electronics door. A similar door deleting the antenna installation has been installed. No limitations are imposed on the aircraft until the MG 10 - Data Link installations are made.

3. Description: Missile Launching System

   Remarks: Launcher extension and retraction times are in excess of that required by Model Specification. A fast action system is being developed to be compatible with specification requirements but is not available for incorporation in this airplane. The only limitations or restrictions imposed with this slower system is the reduction in kill probability due to having to stay on target longer periods of time to fire an equivalent number of missiles.

7. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 31 July 1955.

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION

SAN DIEGO

REPORT ZD-8-021

DATE 7 July 1955

MODEL F-102A

TITLE

REPORT NO. ZD-8-021
DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANE AF S/N 53-1792

CONTRACT AF33(600)-5942

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

FORM 1812 A-4

This preliminary report is prepared to define the condition of the aircraft as of factory completion. This report shall be revised to reflect the exact configuration as of the time of final acceptance on 31 July 1955.

PART I:

The following items are deviations from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1792.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 7 July 1955, are as follows:

ECP No. (CAC-F102-)	Title
233	Finish Requirements - Change of:
1006	Oxygen Filler Valve - Change of:

2. List of required flight tests, Report No. ZC-8-117, revised 4 February 1955, that have not been accomplished on any airplane as of 7 July 1955.

3. Engineering data listed in exhibit of the contract which were required to be submitted prior to 7 July 1955, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract exhibit):

Exhibit "A"

Para. (b) Stress Analysis
(c) Actual Weight and Balance Report
(g) (2) Handbook Flight Operating Instructions
(g) Structural Repair Instructions
(g) Inspection Requirements

4. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-091 dated 19 February 1954, Revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 7 July 1955.

5. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have not been approved as of 7 July 1955.

6. PART A Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted.

1. Description: Power Transformers (For NESA Glass Anti-Ice & Defog Systems)
   Part No.: TRA 294
   Qty: Two Each
   Remarks: Under icing conditions the present system will not satisfactorily anti-ice. Under extreme conditions the defog may not be adequate.

2. Description: Windshield Overheat Warning System
   Part No.: Therm 19, UN 108
   Qty: One Each
   Remarks: This installation provides a warning system to indicate overheat of vinyl portions of windshield. Windshield rain clearing shall not be used on a dry windshield and for not more than 1 1/2 min when wet.

3. Description: Pilot Assist Installation
   Part No: UN 100, UN 36-28, POTE 103-1
   Qty: One Each UN 100 & UN 36-28 & 2 POTE 103-1
   Remarks: Pilot assist system is inoperable until the above items are installed.

4. Description: Trim Servo & Speed Brake
   Part No.: UN 110-1, UN110-2, UN 110-3, UN 110-5
   Qty: One Each
   Remarks: Until the above items are installed the pilot must manually compensate for unstable stick forces (Pitching) when the speed brakes are actuated.

5. Description: Missile Intervalometer
   Part No.: UN 120 Intervalometer
   Qty: One
   Remarks: Part must be installed prior to firing more than one missile at a time.

6. Description: Rocket Intervalometer
   Part No.: UN 66-2
   Qty: One
   Remarks: Part number UN 66-1 has been installed in lieu of shortage part UN 66-2. UN 66-1 is designed for 14 volt operation, therefore the system may not be operated on emergency D.C. power.

6. PART A
(Cont)

7. Description: Pitch Damper System
Part No.: UN 100
Qty: One damper
Remarks: Pitch danger system shall not be used below 15,000 ft. until the above unit is installed.

DRIVE
8. Description: Oil System - For Constant Speed Dive
Part No.: 8-20503
Qty: One Each
Remarks: Zero or negative "G" maneuvers shall be limited to three (3) seconds. Until the above system is installed , maneuver in excess of that mentioned will cause oil starvation in the unit.

9. Description: Rain Clearing Installation
Part No.: VA 931-1 (VALVE)
Qty: One
Remarks: Valve is replaced by a solid plug in duct valve rendering the system inoperable. Until the above noted valve is installed, all-weather operation should not be planned.

10. Description: Anti-Icing Valve (Engine Duct Lips)
Part No: VA 707-1
Qty: One
Remarks: Valve is replaced by a solid plug in duct valve rendering the system inoperable. Until the above noted valve is installed, all-weather operation should not be planned.

11. Description: Hole Cover (Removed Equipment - B.L. 39.25 Sta. 295.00 Missile Bay)
Part No.: 8-17976
Qty: One
Remarks: Wing anti-icing duct was removed which created an opening from the wing leading edge area to the missile bay. This opening allows rocket and missile dust to enter, causing corrosion. Until above part is installed, rocket & missile firing is prohibited.

6. PART A
(Cont)

12. Description: Vertical Fin Tip
Part No.: 8-14520
Qty: One
Remarks: Due to a vendor shortage, the required fin tip could not be installed. The limitations are concerned with the antenna response which is below standard for a tactical airplane. The substituted YF-102 fin tip does not meet the configuration standards of the F-102A but is a suitable substitute until the shortage fin tip is installed.

6. PART A
(Cont)

The following limitation, though not due to parts shortage, should also be noted.

1. Description: Change material of skin. Fuselage Sta. 443.3 to 481.7 Upper side. ACA 8-12881.

Remarks: Without this change incorporated, the airplane shall be limited to the following:

1. Aileron Deflection:
    - (A) Aileron Angle = 7.2° Max. above 12,000 feet.
    - (B) Aileron Angle = 5.0° Max. below 12,000 feet and above 480 knots calibrated.
2. Maximum roll rate of 100°/second for not more than 90° bank.
3. 4g. Maximum Symmetrical load factor for roll maneuvers.

2. Description: Mid-Electronics Door (Data link antenna Installation)

Remarks: A satisfactory UHF Data Link Antenna has not been developed for incorporation in the mid-electronics door. A similar door deleting the antenna installation has been installed. No limitations are imposed on the aircraft until the MG 10 - Data Link installations are made.

3. Description: Missile Launching System

Remarks: Launcher extension and retraction times are in excess of that required by Model Specification. A fast action system is being developed to be compatible with specification requirements but is not available for incorporation in this airplane. The only limitations or restrictions imposed with this slower system is the reduction in kill probability due to having to stay on target longer periods of time to fire an equivalent number of missiles.

7. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 7 July 1955.

ZD-8-007

2289

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-007
DATE 31 Dec. 1955
MODEL YF-102

TITLE
REPORT NO. ZD-8-007

DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF YF-102 AIRPLANE AF S/N 52-7995

CONTRACT AF33(600)-5942

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

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NO.	DATE	BY	CHANGE	PAGES AFFECTED
A	12-30-55	JBR		All
B	10-10-55	WMG	Title and all pages changed	All
C	12-28-55	WMG	Title and all pages changed	All

FORM 1612 A-4

This report is prepared to define the condition of the airplane at time of delivery to the Air Force for final acceptance.

PART I:

The following items are deviations from contractual requirements for Model YF-102 Airplane, AF Serial No. 52-7995.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 19 December 1955, are as follows:

ECP No. (CAC-F102-)	
201	Deletion of Equipment not essential to Flight Test Program.

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to December 19th 1955, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

Exhibit "B" Part I

Paragraph (A) 2. Ejectable Pilot Cockpit Capsule (Decision made 2-25-55 to request deletion from contract)

Paragraph (A) 8. Dynamic Stability & complete Loop Study

It is anticipated that Convair Report ZU-8-016 which fulfills the above requirement will be submitted during February 1956.

Paragraph (B) 5. Spin Test Program (NACA) (Decision was made 2-25-55 to request deletion from contract)

Paragraph (B) 13. Pilot Ejection Capsule

a) Low Speed Test

b) High Speed Test

(Decision made 2-25-55 to delete this entire requirement from contract)

PART I: (Cont)

Paragraph (C) 4. Structural Tests

b) Wing Skin Wrinkling

d) Tests of Shear Type Camloc Repair

e) Dive Brakes, Armament Doors, Elevons and Rudders

g) Sandwich Construction (Door & Wing)

Structural testing as outlined in Exhibit "B", Part I paragraph 4. (a) thru (h) has been partially completed on certain requirements. It is understood however, that the testing as accomplished does not entirely represent the airplane being accepted. Convair Engineering personnel and Air Force personnel have discussed the desireability of deleting this requirement from the contract.

Paragraph (C) 7. Pressurization Heating & Ventilating Test Stand Summary

Convair Report RT-148 which complies with the above will be submitted during the month of January 1956.

Exhibit "A"

Paragraph (b) Stress Analysis

Stress Analysis as outlined in Convair Report ZU-8-003 has been partially completed and reports submitted to AMC. It is understood however, that the stress analysis that have been submitted do not represent the airplane being accepted and is therefore of no value to the Air Force. Convair Engineering personnel and Air Force personnel have discussed this problem. It was decided that a Strength Evaluation Report would be submitted to AMC in lieu of the requirements as outlined in Convair Report AU-8-003. It is anticipated that this report will be submitted on or before August 1956.

3. Equipment listed in the "Equipment Approval Status Record", Report No. ZM-8-091 dated 1 December 1955, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 19 December 1955.

4. PART A: The following are shortages to the airplane at time of final acceptance by the Air Force. It has been jointly agreed by the Air Force and the Contractor that these items of shortage will not be installed in the airplane due to the fact that they are not required to support the airplane's intended usage.

Quantity	Description	Part Number
1	Curtain Assy. (Electrical Equipment Protection)	8-64463
1	Curtain Assy. (Electrical Equipment Protection)	8-64462
1	Light Assy. w/o Dimmer Red (Excess Speed)	AN 3157-6
1	Light Assy. - Fire Control Panel w/o Dimmer Red	AN 3157-6
1	Card - Air Speed Calibration	AF 21-E
1	Air Compressor	871200
1	Compensator (Electrical Equipment Rack)	RG-7007B5
2	Cooler - Hydraulic Oil (Fuel)	87670-1
1	Gyro - Roll	KGG13A6
1	Container Assy. - Jack Pads and Tie Down Fittings	8-92910
2	Eye Bolt-Wing Mooring Pad	SE-0738
1	Container Assy. - Landing Gear Down Lock Pins	8-92911
1	Alignment Pin - N.L.G. Steering Damper	A623717
1	Light Assy. - Main Landing	B-5325-24
1	Light Assy. - Main Landing	B-5325

4. PART B: Flight limitations for this airplane are as follows and as may be noted in the Utility Flight Handbook.

Description:	Ballast Installation
Remarks:	Due to the omission of certain items against this airplane, additional ballast has been added foreward of Station 122.00.
Limitation:	With necessary ballast installed per TVA #38244 against Dwg. 8-00003, the airplane is limited to maneuvers imposing more than 3.0 g's.

Note: Face of accelerometer has been placarded as follows: "Max limit 3 g".

4. PART C: All unaccomplished work tasks on this airplane shall be noted in Air Force Form 263C, Part VI.

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-007
DATE 10 Oct 1955
MODEL YF-102

TITLE

REPORT NO. ZD-8-007
DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF YF-102 AIRPLANE AF S/N 52-7995

CONTRACT AF33(600)-5942

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES 4

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
A	12-30-55	JRR		All
B	10-10-55	WMG	Title and all pages changed	All

FORM 1612A-4

This report is prepared to define the condition of the aircraft as of 10 October 1955 for final acceptance by the Air Force.

PART I:

The following items are deviations from contractual requirements for Model YF-102 Airplane, AF Serial No. 52-7995.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 7 October 1955, are as follows:

ECP No. (CAC-F102-)	Title
NONE	

2. Engineering data listed in exhibit of the contract which were required to be submitted prior to 10 October 1955, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract exhibit):

Report No.	Title
(1)	Exhibit "B" Part I
Remarks:	Paragraph (C) 4. Structural Tests (b) Wing Skin Wrinkling
(2)	Exhibit "B" Part II
ZS-8-107	Misc. Fitting Analysis
ZS-8-011	Armament Report

In lieu of the above requirements and to satisfy all structural criteria requirements for AF 52-7995 YF-102 Airplane, a strength evaluation report as outlined on Page 17, Paragraph 3.4, of the Detail Model Specification ZD-8-001A will be submitted.

3. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-091 dated 19 February 1954, revised 29 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 10 October 1955.

4. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have not been approved as of 10 October 1955.

NOTE: It is anticipated that Items 3 and 4 will be revised on 1 December 1955 and each month thereafter.

5. PART A The following are shortagessat the time of final acceptance by the Air Force. It is anticipated that these items will be reflected in the Air Force Form 263C Part 2.

Quantity	Description	Part No.
1	Indicator - Combination Air Speed & Mach-Meter (Type P-2)	MCREXE-42-123
1	Handbook of Flight Operating Instructions	T.O.1F-102(Y)-1
1	Handbook of Maintenance Instructions	T.O.1F-102(Y)-2
1	Curtain Assy. (Electrical Equipment Protection)	8-64463
1	Curtain Assy. (Electrical Equipment Protection)	8-64462
1	Light Assy. w/o Dimmer Red (Excess Speed)	AN3157-6
1	Light Assy. - Fire Control Panel w/o Dimmer Red	AN3157-6
1	Card - Air Speed Calibration	AF21-E
1	Air Compressor	871200
1	Compensator (Electrical Equipment Rack)	PG-7007B5
1	Gyro - Roll	XGG13A6
2	Eye Bolt-Wing Mooring Pad	SE-0738
2	Jack Pad - Wing	SE-0580
1	Container Assy. - Landing Gear Down Lock Pins	8-92911

5, PART A (Cont)

Quantity	Description	Part No.
1	Light Assy. - Main Landing	B-5325-24
1	Light Assy. - Main Landing	B-5325
1	Elec. Mounting Rack	MOUNT 1060/U
1 ea.	Bridle Assy. - Aircraft Restraining	SE-0583
1 ea.	Ladder - Cockpit Entrance	SE-0618-801
1	Incorporation of Identification to Fuel and Oil System Parts	ACA 8-6545
1 ea.	Installation of Fuel Booster Pumps with Electrical Receptacles in lieu of Pigtails	CVAC # PUM 103-5,103-6
1	Installation of Modified ATM for Inverted Flight	ACA 8-493
1	Rudder System Actuator Replacement of Minn-Honeywell Servo Actuator with Moog Actuator	ACA 8-8540 8-9030
1	Installation of Water Trap and Heaters for Fin Pitots	ACA 8-249
1	Addition of Rigging Pin Provisions in the Controls System	ACA 8-245
1	Installation of Additional Access Door in Fuselage for Easier Engine Removal	ACA 8-5899
2	No. 1 Fuel Tank Pressure Relief Valve	VA 1-112-1

5. PART B Flight limitations for this airplane shall be as noted in the Utility Flight Handbook and such supplements thereto that pertain to this model.

6. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 10 October 1955.

CONSOLIDATED VULTEE

DIVISION San Diego

MODEL YF-102

REPORT ZD-8-007

DATE 1 December 1953
Revised 12/30/53
Revised 18 May 1954

TITLE

REPORT NO. ZD-8-007
INDEX OF APPLICABLE LISTS
AND STATUS OF SECOND YF-102 AIRPLANE
AF SERIAL NUMBER 52-7995
UNDER
CONTRACT AF33(600)-5942

PREPARED BY J R Rogers
J. R. Rogers

H Kennedy
H. R. Kennedy

GROUP Specification

REFERENCE

CHECKED BY

APPROVED BY Wozniak
for R. R. Hoover

NO. OF PAGES 3

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
A	12/30/53	JRR		All

GD 141A

INTENT

THIS IS AN INDEX OF THE APPLICABLE LISTS OF ITEMS TO BE ACCOMPLISHED, AND THE STATUS OF YF-102 AIRPLANE, SERIAL NUMBER AF53-7995. REFERENCE CCN #30, MASTER SERIAL NUMBER N-93192, DATED 2 OCTOBER 1953.

1. Airplane Model Specification Number ZD-8-001, Revised 15 October 1953, plus ECP 40 and 47.

2. List of Open Model Specification Discrepancies, dated 28 November 1953, revised 18 May 1954.

3. Instrumentation Specification, Report Number ZC-8-052, dated 27 November 1953.

4. List of unaccomplished RFA's dated 30 December 1953, revised 18 May 1954.

5. (Closed)

6. (Closed)

7. List of open inspection criticism (CVAC Form No. 27-33A) dated 30 December 1953, revised 18 May 1954.

8. Canceled. Items transferred to Design Change Log Item 23,

9. List of yellow stripe T.V.A's and interim equipment list, revised 30 December 1953.

10. List of approved Government Specification (inspection log breakdown), revised 18 May 1954.

11. (Closed)

12. Engineering data requirements and reports summary, Report Number ZM-8-072, dated 15 October 1953.

13. ECP Status Report, revised 1 December 1953.

14. Equipment Qualification Approved Status Report.

15. Contractor Furnished Equipment Specification Status Report, revised 1 December 1953.

16. (Closed)

17. Historical records, revised 18 May 1954.

18. Aircraft Checker Report, Form 263C, revised 18 May 1954.

19. (Closed)

20. List of Special Bolts (per R-1800E), dated 15 October 1953.

21. Rubber Parts curing date summary list, dated 25 November 1953.

22. List of castings by classification, dated 9 October 1953.

23. Design Change Log

C O N V A I R

A DIVISION OF GENERAL DYNAMICS CORPORATION

SAN DIEGO

REPORT ZD-8-009

DATE 24 Feb 1956

MODEL YF-102

TITLE

REPORT NO. ZD-8-009
DOCUMENTATION FOR WAIVERS
FROM CONTRACTUAL REQUIREMENTS
FOR ACCEPTANCE OF
YF-102 AIRPLANE AF S/N 53-1780

CONTRACT AF33(600)-5942

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES 3

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

FORM 1812 A-4

This report is prepared to define the condition of the aircraft as of factory completion for acceptance by the Air Force.

VALID CANC.

The following items are deviations from contractual requirements for Model F-102A airplane, AF Serial No. 53-1780.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 24 February 1956, are as follows:

ECP No. (CAC-F-102-)	Title
	None

2. Engineering data listed in Exhibits and Tables of the contract which were required to be submitted prior to 24 February 1956, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract Exhibits and Tables):

3. PART A The following are shortages at time of factory completion. It is intended that these items will be reflected in the Air Force form 263, Part II. Some of the following shortage items impose certain limitations on this airplane, these limitations are defined in 3 PART B of this report.

Items denoted by circles opposite parts short refer to corresponding Limitations in Paragraph 3, PART B.

CONTRACTOR FURNISHED EQUIPMENT

Qty	Description	Part No.
1	Curtain Assy (Elec. Equip.Protection) Instl Dwg. 8-64087 (EPD-	8-64463
1	Curtain Assy. (Elec. Equip.Protection) Instl Dwg 8-64087 (EPD-	8-64462

3. PART A
(Cont)

Qty	Description	Part No.	VALID	CANC.
2	Cap Assy. Nose Wheel Well Warning Light W/O Dimmer Amber Instl Dwg 8-64028 (EPD-	AN-3157-8		
1	Panel Assy - Armament Control Instl Dwg 8-64037 (EPD-	8-64328-1		
1	Cap Assy - Missile Misfire Warning Light - Red Instl Dwg 8-64041 (EDP-	C222B-6EF		
1	Card - Air Speed Calibration Instl Dwg 8-92200 (EDP-	AF21-E		
1	Intervalometer - Rocket Instl Dwg 8-67035 (EDP-	1V200		
1	Relay Assy (Armament Door Control) Instl Dwg 8-67035 (EPD-	650-4016		
1	Air Compressor Instl Dwg 8-87607 (EPD-	8-08364 (871200)		
1	Gyro (Yaw) Instl Dwg 8-67098 (EPD-	XGG13A7		
1	Alignment Pin - Nose Landing Gear Steering Damper Instl Dwg 8-52000 (EPD-	A623717		
1	Radome Assy - Nose Instl Dwg 8-70011 (EPD-	8-70411		

VALID CANC.

3. PART A
(Cont)

GOVERNMENT FURNISHED AIRCRAFT EQUIPMENT

Qty	Description	Part No.
1	Radar Set Control Type C-629/APX6 Instl. Dwg. 8-92603 (EPD-	C-16R91

3. PART B

NOTE: There are no flight limitations on this airplane due to the shortages noted in Paragraph 3, PART A of this report. Only those flight limitations which are noted in the utility flight handbook and its supplements apply to this airplane.

3. PART C

Work tasks not accomplished on this airplane at time of final acceptance, shall be referenced in Air Force Form 263c, Part II.

ZD-8-010

OFFICE HAS DISTRIBUTION

ZD-8-110 dated 1 Oct. 1956
Rev. 15 Dec. 1956

1522

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-010
DATE 18 May 1954
MODEL YF-102
REVISED 23 June 1954

TITLE

REPORT NO. ZD-8-010
LIST OF WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR YF-102 AIRPLANE AF S/N 53-1781
CONTRACT AF33(600)-5942

PREPARED BY

GROUP Specification

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES 1

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
1	10-22-56	DDF	Revised	All

The following items are waivers from contractual requirements for Model YF-102 airplane, AF Serial No. 53-1781:

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 22 October 1956, are as follows:

None

2. Engineering data listed in exhibit of the contract which were required to be submitted prior to 22 October 1956 but which had not been submitted as of that date, are as follows:

None

3. Part A The following are shortages at time of factory completion. It is anticipated that these items will be reflected in the AF Form 263c Part II.

3. Part B Shortages as listed in AF Form 263c Part II which effect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or the intended usage. Reference T.O. 1F-102(Y) (II)-1 dated 31 August 1956.

3. Part C Work tasks not accomplished on this airplane at time of final acceptance shall be referenced in AF Form 263c Part II.

ZD_8_018

8

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-018
DATE March 18, 1955
MODEL

TITLE

REPORT NO. ZD-8-018

DOCUMENTATION FOR WAIVERS
FROM CONTRACTUAL REQUIREMENTS
FOR ACCEPTANCE OF
F-102A AIRPLANE AF S/N 53-1789
CONTRACT AF33(600)-5942

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

FORM 1612 A-4

INTRODUCTION

This report is prepared to define the condition of the aircraft as of final Air Force acceptance on March 18, 1955. This report supersedes preliminary report no. ZD-8-018 dated 11 February 1955

ANALYSIS
PREPARED BY
CHECKED BY
REVISED BY

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

PAGE 1
REPORT NO. ZD-8-018
MODEL F-102A
DATE March 18 1955

PART I:

The following items are deviations from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1789:

1. Engineering changes which have been incorporated in this Airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 11 February 1955, are as follows:

ECP No. (CAC-F102)	Title
NONE	

2. Instrumentation in accordance with basic specification EF-8-90-2 dated 9 July 1954, and as detailed in Convair Instrumentation Report No. ZC-8-063 dated 15 October 1954, with wiring Addendum I dated 15 October 1954.

3. List of required flight tests, Report No. ZC-8-117, revised 3 January 1955, that have not been accomplished on any airplane as of 11 February 1955.

4. Engineering data listed in exhibit of the contract which were required to be submitted prior to 11 February but which had not been submitted as of that date, are as follows (paragraph numbers refer to those of the Contract Exhibit).

Exhibit B, Part I	Exhibit B, Part II
(A) 6 - Feel System Bob Weight	(C) Flight Testing ZU-8-013
(C) 4(b) - Wing Skin Wrinkling	
(C) 4(e) - Structural Tests-Dive Brakes, Armament Doors, Elevons and Rudder	

5. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-090 dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 11 February 1955.

6. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 11 February 1955.

7. List of castings, Report No. ZM-8-113 revised 4 March 1955, listing castings used on this airplane, certain of which have approved standards and certain of which do not have approved standards as of 4 March 1955.

8 PART A Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted.

Description: Pitch "G" Limiter
Part No: UN 100
Qty: 1
Remarks: Pitch Damper and Pilots Assist System shall not be used prior to incorporating this shortage. Availability of P/N UN 100 is scheduled for 7-15-55.

Description: Anti-Icing Valve, Duct Inlet
Part No: VA 707
Qty: 1
Remarks: Anti-Icing System cannot be operated until valve 707 is installed. Availability of P/N VA 707 is scheduled for 2/28/55

Description: Switch, Structural Overheat
Part No: CVAC THER 68-1
Qty: 1
Remarks: Switch 68-1 omitted in lieu of flight safety panel. Switch must be installed when flight safety panel is removed. Part installation pending engineering approval

Description: Offset Igniter on Rocket Blast Door
Part No: 8-56554, 8-54538-25
Qty 4 16
Remarks: No rocket firing permitted until these parts are installed. Parts were not available for incorporation prior to delivery. Parts are available from Contractors stock.

Description: Intervalometer
Part No: CVAC UN 66-2
Qty: 1
Remarks: Intervalometer CVAC UN 66-1 has been installed in lieu of the shortage CVAC UN 66-2. The interim installation is to be operated on 14 volts. Do not attempt to operate armament system on emergency D.C. power. Contractor does not have a schedule date for availability of CVAC UN 66-2.

Description: Actuator (Feel & Trim)
Part No: ACTU 13-4-6
Qty: 1
Remarks: Until shortage is incorporated rudder trim rate is limited to 25°/sec instead of 50°/sec. Actuator delivery is scheduled for 3/5/55

PART B

GOVERNMENT FURNISHED SHORTAGES AT TIME OF ACCEPTANCE FROM PRIME CONTRACTORS

1	Handbook of Flight Operating Instructions	T.O. 1F-102A-1
1	Handbook of Maintenance Instructions	T.O. 1F-102A-2
1	Illustrated Parts Catalog	T.O. 1F-102A-4
1	Handbook of Inspection Requirements	T.O. 1F-102A-6
1	Antenna - Glide Slope (ARN-18)	37P-2
1	Motor - Air Turbine	350010
1	Heat Exchanger - Cabin Heat & Ventilation	83080
1	Generator - 30 Volt 75 Amp Direct Current	G129
1	Generator - AC, 115/200 Volt, 3 Phase - 400 Cycle 26 KVA	G280
1	Cooler - Air Turbine Motor Oil	88120
1	Relay - Armament Control	RY-416-B
1	Intervalometer -Rocket	Model 72
1	Alignment Pin - N.L.G. Steering Damper	8-52000-9

8. PART B (Continued)

1	Limiter - Pitch "G"	1JD3356
1	Pitot Tube - Airspeed	AN5816-2
1	Chute Assy. - Drag (Brake)	8-04320

NOTE: THE FOLLOWING LISTED 263C ITEMS ARE INCLUDED IN INSTRUMENTATION KIT REMOVALS AS LISTED IN PART VI, AND ARE NOT A SHORTAGE TO THE CONTRACT

1	Arm Assy. - Rocket & Missile Launcher	8-54409-1
1	Radome Assy. - Nose	8-36069 (8-03333)

GROUND HANDLING EQUIPMENT

1	Ladder - Cockpit Entrance	SE-0618-803
1	Plug Assy - Boundary Layer Duct	SE-0812-1
1	Plug Assy - Boundary Layer Duct	SE-0812-2
4	Support Assy. - Radar	SE-0871

THE REQUIREMENTS OF CONVAIR INSTRUMENTATION REPORT NUMBER ZC-8-063 HAS BEEN FULFILLED WITH THE EXCEPTION OF THE FOLLOWING LISTED INSTRUMENTATION COMPONENTS.

1	Temperature - Pickup	A-9000
2	Accelerometer	A-17-1-120

THE FOLLOWING LISTED ITEMS ARE SHORTAGES AT TIME OF FINAL ACCEPTANCE OF AIRCRAFT 53-1789

1	Valve	VA 707
1	Switch	THER 68-1
1	Tube	8-04319-7
1	Boom Assy.	8-72970
1	Sleeve	SL 24

Item 8 Part B (Continued)

1	Sealer	Seal 80
1	Washer	8-72968-7
1	Sleeve	8-72974
1	Fitting	8-72969
1	Nut	AN364-2012
2	O Ring	GA 24-3
4	Screw	AN 520-6R4
1	Weld Assy.	8-28120-19
1	Weld Sub Assy.	8-28120-25
1	Hose	FOS 323
1	Tube Assy.	8-28116-11
1	Seal Ring	COUPL-163
1	Tube Assy.	8-28116-7
1	Seal	8-27158
1	Pan	8-27159
1	Pan	8-27160
1	Clamp	8-27161
1	Seal	8-27162
1	Strut	8-28120
2	Clamp	AN737W30
1	Bolt	AN775-4
1	Elbow	AN778-4
2	Washer	AN901-4A
1	Coupling	NAS 520-4-36
1	Connector	COUPL 162
1	Seal Ring	COUPL 162-1
1	Nut	COUPL 162-2
1	Ferrule	COUPL 162-3
1	Tube	8-38013-35
1	Tube	8-38013-37
1	Tube	8-38013-39
1	Tube	8-38013-41
2	Elbow	AN 837-4D
2	Nut	AN 924-4D
4	Washer	AN 9600716L
2	Tee	AN 784-4D
2	Elbow	AN 833-4D
2	Nut	AN 6289-4D
2	Gasket	AN 6290-4
1	Relay	Box 116

9. List of Materials, Report No. ZM-8-116 revised 17 May 1954, Listing materials used on this airplane which were not approved as of 15 March 1955.

PART II

The following items are variations from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1789:

1. Report No. ZM-8-112 dated 11 February 1955, list of parts or equipment, or both, temporarily installed or parts for which installation is postponed as of 11 February 1955.

2. Report No. ZM-8-114, "List of unaccomplished Air Force Inspection Discrepancies". NONE.

DIVISION San Diego
MODEL F-102A

REPORT ZD-8-018
DATE 11 Feb 1955

TITLE

REPORT NO. ZD-8-018

LIST OF WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR F-102A AIRPLANE AF S/N 53-1789

CONTRACT AF33(600)-5942

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES 2
NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

GD 241A

The Following items are waivers from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1789:

1. Engineering changes which have been incorporated in this Airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 11 February 1955, are as follows:

ECP No. (CAC-F102-)	Title
NONE	

2. Instrumentation as outlined in Convair Instrumentation Report No. ZC-8-063 dated 15 October 1954, with wiring Addendum I dated 15 October 1954.

3. List of required flight tests, Report No. ZC-8-117, revised 3 January 1955, that have not been accomplished on any airplane as of 11 February 1955.

4. Report No. ZM-8-112 dated 11 February 1955, list of parts or equipment, or both, temporarily installed or parts for which installation is postponed as of 11 February 1955.

5. Engineering data listed in exhibit of the contract which were required to be submitted prior to 11 February but which had not been submitted as of that date, are as follows (paragraph numbers refer to those of the Contract Exhibit):

Exhibit B, Part I

(A) 6 - Feel System Bob Weight
(C) 4(b) - Wing Skin Wrinkling
(C) 4(e) - Structural Tests - Dive Brakes, Armament Doors, Elevons and Rudder

Exhibit B, Part II

(C) Flight Testing ZU-8-013

6. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-090 dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 11 February 1955.

7. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 11 February 1955.

8. List of castings, Report No. ZM-8-113 revised 11 February 1955, listing castings used on this airplane, certain of which have approved standards and certain of which do not have approved standards as of 11 February 1955.

9. Shortages as listed in Air Force Form 263C, Part II.

10. Report No. ZM-8-114 dated 11 February 1955, List of unaccomplished Air Force Inspection Discrepancies as of 11 February 1955.

11. Report No. ZM-8-115 dated 11 February 1955, List of uncompleted manufacturing functions (for example, installations or operations due to shortages) as of 11 February 1955.

12. List of Materials, Report No. ZM-8-116 revised 17 May 1954, Listing materials used on this airplane which were not approved as of 11 February 1955.

Deviations for Second airplane

DIVISION San Diego

MODEL F-102A

REPORT ZD-8-018

DATE 11 Feb 1955

[illegible] 15,

TITLE

REPORT NO. ZD-8-018
DOCUMENTATION FOR WAIVERS
FROM CONTRACTUAL REQUIREMENTS
FOR ACCEPTANCE OF
F-102A AIRPLANE AF S/N 53-1789
CONTRACT AF33(600)-5942

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

INTRODUCTION

This report is prepared to define the condition of the aircraft as of the date of this report. The report is in two parts; Part I lists deviations from contractual requirements which require Headquarters, AMC approval. Part II lists variations from contractual requirements which require Local AFPR approval.

This report is prepared to define the condition of the aircraft as of final Air Force acceptance on March 18, 1955. This report is [illegible] preliminary report No. [illegible] 8-018 dated [illegible] 1955

PART I:

The following items are deviations from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1789:

1. Engineering changes which have been incorporated in this Airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 11 February 1955, are as follows:

ECP No. (CAC-F102-)	Title
NONE	

2. Instrumentation in accordance with basic specification EF-8-90-2 dated 9 July 1954, and as detailed in Convair Instrumentation Report No. ZC-8-063 dated 15 October 1954, with wiring Addendum I dated 15 October 1954.

3. List of required flight tests, Report No. ZC-8-117, revised 3 January 1955, that have not been accomplished on any airplane as of 11 February 1955.

4. Engineering data listed in exhibit of the contract which were required to be submitted prior to 11 February but which had not been submitted as of that date, are as follows (paragraph numbers refer to those of the Contract Exhibit).

Exhibit B, Part I	Exhibit B, Part II
(A) 6 - Feel System Bob Weight	(C) Flight Testing ZU-8-013
(C) 4(b) - Wing Skin Wrinkling	
(C) 4(e) - Structural Tests-Dive Brakes, Armament Doors, Elevons and Rudder	

5. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-090 dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 11 February 1955.

6. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 11 February 1955.

7. List of castings, Report No. ZM-8-113 revised 11 February 1955, listing castings used on this airplane, certain of which have approved standards and certain of which do not have approved standards as of 11 February 1955.

8. PART A Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted.

Description: Pitch "G" Limiter
Part No: UN 100
Qty: 1
Remarks: Pitch Damper and Pilots Assist System shall not be used prior to incorporating this shortage. Availability of P/N UN 100 is scheduled for 7-15-55.

Description: Anti-Icing Valve, Duct Inlet
Part No: VA 707
Qty: 1
Remarks: Anti-Icing System cannot be operated until valve 707 is installed. Availability of P/N VA 707 is scheduled for 2/28/55

Description: Switch, Structural Overheat
Part No: CVAC THER 68-1
Qty: 1
Remarks: Switch 68-1 omitted in lieu of flight safety panel. Switch must be installed when flight safety panel is removed. Part installation pending engineering approval

Description: Offset Igniter on Rocket Blast Door
Part No: 8-56554, 8-54538-25
Qty: 4 16
Remarks: No rocket firing permitted until these parts are installed. Parts were not available for incorporation prior to delivery. Parts are available from Contractors stock.

Description: Intervalometer
Part No: CVAC UN 66-2
Qty: 1
Remarks: Intervalometer CVAC UN 66-1 has been installed in lieu of the shortage CVAC UN 66-2. The interim installation is to be operated on 14 volts. Do not attempt to operate armament system on emergency D.C. power. Contractor does not have a schedule date for availability of CVAC UN 66-2.

Description: Landing Light (Installation)
Part No: 8-65003-7 and -8
Qty: 1 each
Remarks: Aircraft limited to daylight flight. Parts for installation are available in Contractors stock. Installation of lights has been omitted pending completion of engineering paper.

Description: Actuator (Feel & Trim)
Part No: ACTU 13-4-6
Qty: 1
Remarks: Until shortage is incorporated rudder trim rate is limited to 25°/sec instead of 50°/sec. Actuator delivery is scheduled for 3/5/55

PART B

GOVERNMENT FURNISHED SHORTAGES AT TIME OF ACCEPTANCE FROM PRIME CONTRACTORS

1	Indicator-Cabin Air Pressure, Pressurized Aircraft, 1 7/8" Dial-Type MA-1	MIL-I-5099A
1	Handbook of Flight Operating Instructions	T.O. 1F-102A-1
1	Handbook of Maintenance Instructions	T.O. 1F-102A-2
1	Illustrated Parts Catalog	T.O. 1F-102A-4
1	Handbook of Inspection Requirements	T.O. 1F-102A-6
1	Handbook of Weight & Balance Data	T.O. AN01-1B-40
1	Antenna - Glide Slope (ARN-18)	37P-2
1	Box - Master Warning Relay	53C63-1
2	Cap Assy. - Nose Wheel Well Warning Light w/o Dimmer Green	AN3157-7

8. PART B (Continued)

1	Motor - Air Turbine	350010
1	Heat Exchanger - Cabin Heat & Ventilation	83080
1	Generator - 30 Volt 75 Amp Direct Current	G129
1	Generator - AC, 115/200 Volt, 3 Phase - 400 Cycle 26 KVA	G280
1	Cooler - Air Turbine Motor Oil	88120
1	Relay - Armament Control	RY-416-B
1	Intervalometer - Rocket	Model 72
1	Alignment Pin - N.L.G. Steering Damper	8-52000-9
1	Limiter - Pitch "G"	1JD3356
1	Pitot Tube - Airspeed	AN5816-2
1	Chute Assy. - Drag (Brake)	8-04320
1	Light Assy - Main Landing	AN3147-1 (B5325-24)
1	Light Assy. - Main Landing	AN3147-1 (B5325-24)

NOTE: THE FOLLOWING LISTED 263C ITEMS ARE INCLUDED IN INSTRUMENTATION KIT REMOVALS AS LISTED IN PART VI, AND ARE NOT A SHORTAGE TO THE CONTRACT

1	Arm Assy. - Rocket & Missile Launcher	8-54409-1
1	Radome Assy. - Nose	8-36069 (8-03333)

GROUND HANDLING EQUIPMENT

1	Shield Assy. - Intake Duct	SE-0814-1
1	Shield Assy. - Intake Duct	SE-0814-2

[illegible] Sheet [illegible] (Cont)

1	Ladder - Cockpit Entrance	8R-0618-802
1	[illegible] Assy - Boundary Layer Duct	8E-0312-1
1	[illegible] Assy - Boundary Layer Duct	8E-0312-2
4	Support Assy. - Door	8E-0821
4	Lock Assy. - Upper Missile Door	8R-0746-801

THE REQUIREMENTS OF CONVAIR INSTRUMENTATION REPORT NUMBER ZC-8-063 HAS [illegible] INSTRUMENTA- [illegible].

1	Temperature - Pickup	A-9000
9	Accelerometer	A-12-1-130 & [illegible] of [illegible] Tank

THE FOLLOWING ITEMS [illegible] REPORT OF AIRCRAFT 53-1220 AS ~~[illegible]~~

1	Valve	5A 702
1	[illegible]	T.I.L. 68-1
1	Tube	8-06310-7
1	Actuator	~~AC[illegible]-13-4-6~~
4	Ignitor	8-36554
16	Angle	8-54633-25
1	Actuator	AC[illegible] 13-7-4
1	Sub Assy.	8-36105-9

Item 8 Part B (Continued)

1	Boom Assy.	8-72970
1	Sleeve	SL 24
1	Sealer	Seal 80
1	Washer	8-72968-7
1	Sleeve	8-72974
1	Fitting	8-72969
1	Nut	AN364-2012
2	O Ring	GA 24-3
4	Screw	AN 520-6R4
1	Fairing Assy.	8-28114-29
1	Cover Assy.	8-28108
1	Cover Assy.	8-28109
AR	Lockwire	AN995C41
4	Bolt	AN74-24
1	Weld Assy.	8-28120-19
1	Weld Sub Assy.	8-28120-25
1	Hose	HOS 323
1	Tube Assy.	8-2811[illegible]-11
1	Seal Ring	COUPL-162
1	Tube Assy.	8-28116-7
1	Seal	8-27158
1	Pan	8-27159
1	Pan	8-27160
1	Clamp	8-27161
1	Seal	8-27162
1	Strut	8-28120
2	Clamp	AN737W30
1	Bolt	AN775-4
1	Elbow	AN778-4
2	Washer	AN901-4A
1	Coupling	NAS 520-4-36
1	Connector	COUPL 162
1	Seal Ring	COUPL 162-1
1	Nut	COUPL 162-2
1	Ferrule	COUPL 162-3
2	Fitting	8-71759
1	Support	8-17619-96
1	Doubler	8-17619-97
1	Support	8-17619-95
1	Doubler	8-17619-97

Item 8 Part 8 (Cont)

~~1~~	~~Ring~~	~~8-49328-7~~
~~1~~	~~Spring~~	~~8-47627~~
~~2~~	~~Strap~~	~~TVA 29195-7~~
~~4~~	~~Pillow~~	~~TVA 29195-9~~
~~1~~	~~Strap~~	~~TVA 29134-7~~
1	TUBE	8-35012-35
1	"	" -37
1	"	" -39
1	"	" -41
2	ELBOW	AN 837-4D
2	NUT	AN 924-4D
4	WASHER	AN 960C716L
2	TEE	AN 824-4D
2	ELBOW	AN 833-4D
2	NUT	AN 6289-4D
2	GASKET	AN 6290-4
1	TUBING	[illegible]

9. List of Materials, Report No. ZM-8-116 revised 17 May 1954, Listing materials used on this airplane which were not approved as of 11 February 1955.

PART II

The following items are variations from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1789:

1. Report No. ZM-8-112 dated 11 February 1955, list of parts or equipment, or both, temporarily installed or parts for which installation is postponed as of 11 February 1955.

2. Report No. ZM-8-114 dated 11 February 1955, List of unaccomplished Air Force Inspection Discrepancies as of 11 February 1955.

[illegible] shall be on a
separate page.

ZD-8-019

8

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-019
DATE 31 March 1955
MODEL F-102A

TITLE

REPORT NO. ZD-8-019

DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANE AF S/N 53-1790

CONTRACT AF33(600)-5942

PREPARED BY ____________________

GROUP Project Specifications

REFERENCE ____________________

CHECKED BY ____________________

APPROVED BY ____________________

NO. OF PAGES ____________

NO. OF DIAGRAMS ____________

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

FORM 1812A-4

This report is prepared to define the condition of the aircraft as of final AF acceptance on March 31 1955. This supersedes Preliminary Report No. ZD-8-019 Dated March 4 1955.

Part I:

The following items are deviations from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1790.

1. Engineering changes which have been incorporated in this Airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 31 March 1955, are as follows:

ECP NO. (CAC-F-102-)	Title
NONE	

2. List of required flight tests, Report No. ZC-8-117, revised 3 January 1955, that have not been accomplished on any airplane as of 31 March 1955.

3. Engineering data listed in exhibit of the contract which were required to be submitted prior to 11 February but which had not been submitted as of that date, are as follows (paragraph numbers refer to those of the Contract Exhibit).

Exhibit B Part I	Exhibit B Part II
(A) 6 - Feel System Bob Weight	(C) Flight Testing ZU-8-013
(C) 4(b) - Wing Skin Wrinkling	
(C) 4(e) - Structural Tests-Dive Brakes, Armament Doors, Elevons and Rudder	

4. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-090 dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 31 March 1955.

5. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 31 March 1955.

6. List of castings, Report No. ZM-8-113 revised 21 March 1955, listing castings used on this airplane, certain of which have approved standards and certain of which do not have approved standards as of 31 March 1955.

7. PART A Shortages as listed in Air Force Form 263C, Part II, which affect the performance of mission of the airplane as noted.

Description: Pitch "G" Limiter
Part No: UN 100
Qty: 1
Remarks: Pitch damper and Pilots assist system shall not be used unless CVAC UN100 Pitch "G" Limiter is installed.

Description: Anti-Icing Valve, Duct Inlet
Part No: VA 707
Qty: 1
Remarks: The airplane should not be flown in icing condition until VA 707 is installed.

Description: Structural Overheat Switch
Part No: CVAC THER 68-1
Qty: 1
Remarks: If flight safety panel is removed, CVAC, THER 68-1 must be installed.

Description: Intervalometer
Part No: CVAC UN66-2
Qty: 1
Remarks: Until unit UN66-2 is installed armament system can not be operated with rockets.

Description: Rudder Control Valve and Cylinder Revision
Part No: ACA 10318
Qty: 1
Remarks: ACA 10318 increases rudder control valve gain to provide increased rudder rate in the event of rudder servo actuator malfunction. It allows the pilot to return the rudder to neutral faster in the event of an incorrect hard over signal.

Description: Fume seal of Controls
Part No.: ACA 416
Qty: 1
Remarks: ACA 416 and amendment dated 2-5-55 or TVA 33946A must be installed before firing tests.

7 PART B

GOVERNMENT FURNISHED SHORTAGES AT TIME OF ACCEPTANCE FROM PRIME CONTRACTOR

1	Handbook of Flight Operating Instructions	T.O. 1F-102A-1
1	Handbook of Maintenance	T.O. 1F-102A-2
1	Illustrated Parts Catalog	T.O. 1F-102A-4
1	Handbook of Inspection	T.O. 1F-102A-6

CONTRACTOR FURNISHED SHORTAGES AT TIME OF ACCEPTANCE FROM PRIME CONTRACTOR

1	Antenna - Glide Slope	37P-2
1	Motor - Air Trubine	3500010
1	Heat Exchanger - Cabin Heat & Ventilation	83080
1	Generator - 30 Volt 75 Amp Direct Current	G129
1	Generator - AC, 115/200 Volt, 3 Phase - 400 Cycle 26 KVA	G280
1	Cooler - Air Turbine Motor Oil	88120
1	Intervalometer - Missile	Model 71 or IV-100-4
1	Intervalometer - Rocket	Model 72
1	Alignment Pin - N.L.G. Steering Damper	8-52000-9
1	Limiter - Pitch "G"	IJD3356
1	Pitot Tube - Airspeed	AN5816-2
1	Chute Assy. - Drag (Brake)	8-04320

7 PART B (Cont)

GROUND HANDLING EQUIPMENT

1	Ladder - Cockpit Entrance	SE-0618-803
1	Plug Assy. - Boundary Layer Duct	SE-0812-1
1	Plug Assy. - Boundary Layer Duct	SE-0812-2
1	Support Assy. - Radar Doors Hold Open	SE-0871
1	Cover - Heat Exchanger Duct Exit	SE-0804
1	Lock Assy. - Drag Chute Door Safety	SE-0910

THE REQUIREMENTS OF CONVAIR INSTRUMENTATION REPORT NUMBER ZC-8-064 HAS BEEN FULFILLED WITH THE EXCEPTION OF THE FOLLOWING LISTED INSTRUMENTATION COMPONENTS.

1	Temperature - Pickup	A-9000

THE FOLLOWING LISTED ITEMS ARE SHORTAGES AT TIME OF FINAL ACCEPTANCE OF AIRCRAFT 53-1790.

1	Valve	VA 707
1	Switch	THER 68-1
1	Boom Assy.	8-72970
1	Sleeve	SL 24
1	Sealer	Seal 80
1	Washer	8-72968-7
1	Sleeve	8-72974
1	Fitting	8-72969
1	Nut	AN364-2012
2	O Ring	GA 24-3
4	Screw	AN520-6R4
1	Hose	HOS 323
1	Tube Assy.	8-28116-11
1	Seal Ring	COUPL 163

7 PART B (Cont)

1	Tube Assy.	8-28116-7
1	Seal	8-27158
1	Pan	8-27159
1	Pan	8-27160
1	Clamp	8-27161
1	Seal	8-27162
1	Strut	8-28120
2	Clamp	AN737W30
1	Bolt	AN775-4
2	Elbow	AN778-4
2	Washer	AN901-4A
1	Coupling	NAS520-4-36
1	Connector	COUPL 162
1	Seal Ring	COUPL 162-1
1	Nut	COUPL 162-2
1	Ferrule	COUPL 162-3
1	Mount Assy.	8-36564
1	Angle	8-36565-7
1	Angle	8-36565-8
1	Tube	8-38013-35
1	Tube	8-38013-37
1	Tube	8-38013-39
1	Tube	8-38013-41
2	Elbow	AN837-4D
2	Nut	AN924-4D
4	Washer	AN9600716L
2	Tee	AN784-4D
2	Elbow	AN833-4D
2	Nut	AN6289-4D
2	Gasket	AN6290-4
1	Valve	VA343-4
1	Cylinder	CY316-3
1	Cylinder	CY316-4
4	Screw	AN509-10R12
4	Nut	AN365-1032
1	Cylinder	CVAC CY135
1	Sub-Assy.	8-28114-29
1	Cover Assy.	8-28108
1	Cover Assy.	8-28109
AR	Lockwire	AN995C41
4	Bolt	AN74-24

7 PART B (Cont)

THE FOLLOWING LISTED 263C ITEMS ARE INCLUDED IN INSTRUMENTATION KIT REMOVALS AS LISTED IN PART VI, AND ARE NOT A SHORTAGE TO THE CONTRACT.

1	Radome	8-36069
1	Cylinder-Rcoket Launcher	1300200
1	Launcher Arm-Rocket	8-54409-1

8 List of Materials, Report No. ZD-8-116 revised 17 May 1954 Listing materials used on this airplane which were not approved as of 31 March 1955.

PART II

The following items are variations from contractural requirements for Model F-102A Airplane, AF Serial No. 53-1790.

1. Report No. ZM-8-112 dated 21 March 1955, list of parts or equipment, or both, temporarily installed or parts for which installation is postponed as of 31 March 1955.

2. Unaccomplished Air Force Inspection Discrepancies as of 31 March 1955. None.

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-019
DATE 4 March 1955
MODEL F-102A

TITLE
REPORT NO. ZD-8-019
DOCUMENTATION FOR WAIVERS
FROM CONTRACTUAL REQUIREMENTS
FOR ACCEPTANCE OF
F-102A AIRPLANE AF S/N 53-1790
CONTRACT AF33(600)-5942

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES 3
NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

FORM 1812 A-4

This preliminary report is prepared to define the condition of the aircraft as of factory completion. This report shall be revised to reflect the exact configuration as of the time of final AF acceptance on 31 March 1955.

Part I:

The following items are deviations from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1790.

1. Engineering changes which have been incorporated in this Airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 4 March 1955, are as follows:

ECP No. (CAC-F102-)	Title
NONE	

2. List of required flight tests, Report No. ZC-8-117, revised 3 January 1955, that have not been accomplished on any airplane as of 4 March 1955.

3. Engineering data listed in exhibit of the contract which were required to be submitted prior to 11 February but which had not been submitted as of that date, are as follows (paragraph numbers refer to those of the Contract Exhibit).

Exhibit B Part I		Exhibit B Part II
(A) 6	Feel System Bob Weight	(C) Flight Testing ZU-8-013
(C) 4(b) -	Wing Skin Wrinkling	
(C) 4(e) -	Structural Tests-Dive Brakes, Armament Doors, Elevons and Rudder	

4. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-009 dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 4 March 1955.

5. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 4 March 1955.

6. List of castings, Report No. ZM-8-113 revised 4 March 1955, listing castings used on this airplane, certain of which have approved standards and certain of which do not have approved standards as of 4 March 1955.

7. PART A Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted.

Description: Pitch "G" Limiter
Part No: UN 100
Qty: 1
Remarks: Pitch Damper and Pilots Assist System shall not be used prior to incorporating this shortage. Availability of P/N UN 100 is scheduled for 7-15-55.

Description: Anti-Icing Valve, Duct Inlet
Part No: VA 707
Qty: 1
Remarks: Anti-Icing System cannot be operated until valve 707 is installed. Availability of P/N VA707 is scheduled for 2/28/55

Description: Switch, Structural Overheat
Part No: CVAC THER 68-1
Qty: 1
Remarks: Switch 68-1 omitted in lieu of flight safety panel. Switch must be installed when flight safety panel is removed. Part installation pending engineering approval.

Description: Intervalometer
Part No: CVAC UN 66-2
Qty: 1
Remarks: Intervalometer CVAC UN 66-1 has been installed in lieu of the shortage CVAC UN 66-2. The interim installation is to be operated on 14 volts. Do not attempt to operate armament system on emergency D.C. power. Contractor does not have a schedule date for availability of CVAC UN 66-2.

Description: Actuator (Feel & Trim)
Part No: ACTU 13-4-6
Qty: 1
Remarks: Until shortage is incorporated rudder trim rate is limited to 25°/sec instead of 50°/sec. Actuator delivery is scheduled for 3/5/55.

8. List of Materials, Report No. ZM-8-116 revised 17 May 1954 Listing materials used on this airplane which were not approved as of 4 March 1955.

PART B

GOVERNMENT FURNISHED SHORTAGES
AS OF 1 MARCH 1955

Quantity	Description	Part Number
	(A [illegible])	
1	Plug Assy	SE 0812-1
1	Plug Assy	SE 0812-2
1	Shield Assy	SE 0814-1
1	Shield Assy	SE 0814-2
1	Funnel Assy	SE 0787
1	Encl. Assy	8-92636-11
1	Encl. Assy	8-92636-12
1	Encl. Assy	8-92636-13
1	Encl. Assy	8-92636-14
2	Panel Assy	8-92622-5
2	Panel Assy	8-92622-801
1	Container	8-92643
1	Mech Wre.	SE 0804
1	Cover	SE 0755-805
1	Cover	SE 0844
4	Lock	SE 0746-801
4	Lock	SE 0808
1	Ladder	SE 0618-802
1	Bar	SE 0580
1	Bridle	SE 0583
1	Shield	SE 0570-805
2	Lock	SE 0790
4	Lock	SE 0634-803
2	Lock	SE 0751-801
1	Lock Assy	SE 0910
1	Boom Assy	8-72970
1	Sleeve	SE 24
1	Sealer	Seal 80
1	Washer	8-72968-7
1	Sleeve	8-72924
1	Fitting	8-72969
1	Nut	AN 364-2012
2	O-Ring	AA 24-2
4	Screw	AN 520-6R4
1	Pitot Tube	AN 5816-2
1	Tube Assy	8-38013-25
1	Tube Assy	8-38013-37

Quantity	Description	Part Number
1	Tube Assy	8-38013-39
1	Tube Assy	8-38013-41
2	Elbow	AN 837-4D
2	Nut	AN 924-4D
4	Washer	AN 960-716L
2	Tee	AN 824-4D
2	Elbow	AN 833-4D
2	Nut	AN 6289-4D
2	Gasket	AN 6290-4
1	Antenna	AT 36-31
1	Pt. Assy	8-36564
1	Angle	8-36565-7
1	Angle	8-36565-8
1	Sub Assy	8-36105-9
1	Hose	Hog 303
1	Tube Assy	8-27116-7
1	Seal	8-27158
1	Pan Assy	8-27159
1	Pan	8-27160
1	Clamp	8-27161
1	Seal	8-27162
1	Strut Assy	8-27190
2	Clamp	AN737 TW30
1	Bolt	AN 225-4
1	Elbow	AN 228-4
2	Washer	AN 901-4A
1	Coupling	MS9320-4-36
1	Connector	COMPT 162
1	Seal Ring	COMPT 162-1
1	Nut	COMPT 162-2
1	Ferrule	COMPT 162-3
1	Fairing Assy	8-23114-29
1	Cover Assy	8-23105
1	Cover Assy	8-23109
	Lockwire	AN 995C41
4	Bolt	AN 24-24
1	Switch	SW 67-1
1	Valve	VA 202
1	Limiter	LM 97
1	Valve	VA 343-4
1	Actuator	ACTR 13-1-4
1	Limiter	LM 100
4	Screw	AN509-10R12
4	Nut	AN365-1032
1	[illegible]	IT 66-3
1	Actuator	ACTR 13-4-6
1	Cyl. Assy	CY 135
4	Support	SP 0921

ZD.8-022

C O N V A I R

A DIVISION OF GENERAL DYNAMICS CORPORATION

SAN DIEGO

REPORT ZD-8-022A

DATE 31 July 1955

MODEL F-102A

TITLE

REPORT NO. ZD-8-022

DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANE AF S/N 53-1793

CONTRACT AF33(600)-5942

PREPARED BY ______________________

GROUP Project Specifications

____

REFERENCE ______________________

CHECKED BY ______________________

APPROVED BY ______________________

NO. OF PAGES ______________

NO. OF DIAGRAMS ______________

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED
A	4-30-57	WFB	Revised to reflect configuration at time of final acceptance	All

FORM 1812 A-4

This report is prepared to define the condition of the aircraft for final acceptance by the Air Force.

PART I:

The following items are deviations from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1793.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 30 April 1957 are as follows:

None

2. Engineering data listed in exhibit of the contract which were required to be submitted prior to 30 April 1957 but which have not been submitted as of that date, are as follows (paragraph numbers refer to those of the contract exhibit):

None

3. PART A The following are shortages as of 30 April 1957. It is anticipated that these items will be reflected in the Form DD-780-2 consisting of 2 pages dated 30 April 1957 and Form DD-250 consisting of 93 pages dated 30 April 1957.

3. PART B Flight limitations as listed in Department of Defense Form DD-781, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpreted to mean the flight test assignment or the intended usage.

3. PART C Work tasks not accomplished on this airplane shall be referenced in Department of Defense Form DD-780-2 consisting of 2 pages dated 30 April 1957, and Form DD-250 consisting of 93 pages dated 30 April 1957.

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

REPORT ZD-8-022
DATE 13 July 1955
MODEL F-102A

TITLE

REPORT NO. ZD-8-022
DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANE AF S/N 53-1793
CONTRACT AF33(600)-5942

PREPARED BY ____________ GROUP Project Specifications

REFERENCE ____________

CHECKED BY ____________ APPROVED BY ____________

NO. OF PAGES ____________
NO. OF DIAGRAMS ____________

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

FORM 1812A-4

This preliminary report is prepared to define the condition of the aircraft as of factory completion. This report shall be revised to reflect the exact configuration as of the time of final acceptance on 31 July 1955.

ANALYSIS
PREPARED BY
CHECKED BY
REVISED BY

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

PAGE 1
REPORT NO. ZD-8-022
MODEL F-102A
DATE 13 July 1955

PART I:

The following items are deviations from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1793.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 13 July 1955, are as follows:

ECP No. (CAC-F102-)	Title
233	Finish Requirements - Change of:
1006	Oxygen Filler Valve - Change of:

2. List of required flight tests, Report No. ZC-8-117, revised 4 February 1955, that have not been accomplished on any airplane as of 13 July 1955.

3. Engineering data listed in exhibit of the contract which were required to be submitted prior to 13 July 1955, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract exhibit):

Exhibit "A"

Para. (b) Stress Analysis
(c) Actual Weight and Balance Report
(g) (2) Handbook Flight Operating Instructions
(g) Structural Repair Instructions
(g) Inspection Requirements

4. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-091 dated 19 February 1954, Revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 13 July 1955.

5. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, revised 21 September 1954, which is installed in this airplane, certain of which have not been approved as of 13 July 1955.

6. PART A Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted.

1. Description: Power Transformers (For NESA Glass Anti-Ice & Defog Systems)
Part No.: TRA 294
Qty: Two Each
Remarks: Under icing conditions the present system will not satisfactorily anti-ice. Under extreme conditions the defog may not be adequate.

2. Description: Windshield Overheat Warning system
Part No.: Therm 19, UN 108
Qty: One Each
Remarks: This installation provides a warning system to indicate overheat of vinyl portions of windshield. Windshield rain clearing shall not be used on a dry windshield and for not more than 1 1/2 min when wet.

3. Description: Pilot Assist Installation
Part No.: UN 100, UN 36-28, POTE 103-1
Qty: One Each UN 100 & UN 36-28 & 2 POTE 103-1
Remarks: Pilot assist system is inoperable until the above items are installed.

4. Description: Trim Servo & Speed Brake
Part No.: UN 110-1, UN 110-2, UN 110-3, UN 110-6
Qty: One Each
Remarks: Until the above items are installed the pilot must manually compensate for unstable stick forces (Pitching) when the speed brakes are actuated.

5. Description: Missile Intervalometer
Part No.: UN 120 Intervalometer
Qty: One
Remarks: Part must be installed prior to firing more than one missile at a time.

6. Description: Rocket Intervalometer
Part No.: UN 66-2
Qty: One
Remarks: Part number UN 66-1 has been installed in lieu of shortage part UN 66-2. UN 66-1 is designed for 14 volt operation, therefore the system may not be operated on emergency D.C. power.

6. PART A (Cont)

7. Description: Pitch Damper System
Part No.: UN 100
Qty: One
Remarks: Pitch damper system shall not be used below 15,000 ft. until the above unit is installed.

8. Description: Oil System - For Constant Speed Drive.
Part No.: 8-20503
Qty: One Each
Remarks: Zero or negative "G" maneuvers shall be limited to three (3) seconds. Until the above system is installed, maneuver in excess of that mentioned will cause oil starvation in the unit.

9. Description: Rain Clearing Installation
Part No.: VA 931-1 (VALVE)
Qty: One
Remarks: Valve is replaced by a solid plug in duct valve rendering the system inoperable. Until the above noted valve is installed, all-weather operation should not be planned.

10. Description: Anti-Icing Valve (Engine Duct Lips)
Part No.: VA 707-1
Qty: One
Remarks: Valve is replaced by a solid plug in duct valve rendering the system inoperable. Until the above noted valve is installed, all-weather operation should not be planned.

11. Description: Hole Cover (Removed Equipment - B.L. 39.25 Sta. 295.00 Missile Bay)
Part No.: 8-17976
Qty: One
Remarks: Wing anti-icing duct was removed which created an opening from the wing leading edge area to the missile bay. This opening allows rocket and missile dust to enter, causing corrosion. Until above part is installed, rocket & missile firing is prohibited.

6. PART A
(Cont)

12. Description: Vertical Fin Tip
Part No.: 8-14520
Qty: One
Remarks: Due to a vendor shortage, the required fin tip could not be installed. The limitations are concerned with the antenna response which is below standard for a tactical airplane. The substituted YF-102 fin tip does not meet the configuration standards of the F-102A but is a suitable substitute until the shortage fin tip is installed.

6. PART A
(Cont)

The following limitation, though not due to parts shortage, should also be noted.

1. Description: Change material of skin. Fuselage Sta. 443.3 to 481.7 Upper side. ACA 8-12881.

   Remarks: Without this change incorporated, the airplane shall be limited to the following:

   1. Aileron Deflection:
      (A) Aileron Angle = 7.2° Max. above 12,000 feet.
      (B) Aileron Angle = 5.0° Max. below 12,000 feet and above 480 knots calibrated.
   2. Maximum roll rate of 100°/second for not more than 90° bank.
   3. 4g. Maximum Symmetrical load factor for roll maneuvers.

2. Description: Mid-Electronics Door (Data link antenna Installation)

   Remarks: A satisfactory UHF Data Link antenna has not been developed for incorporation in the mid-electronics door. A similar door deleting the antenna installation has been installed. No limitations are imposed on the aircraft until the MG 10 - Data Link installations are made.

3. Description: Missile Launching System

   Remarks: Launcher extension and retraction times are in excess of that required by Model Specification. A fast action system is being developed to be compatible with specification requirements but is not available for incorporation in this airplane. The only limitations or restrictions imposed with this slower system is the reduction in kill probability due to having to stay on target longer periods of time to fire an equivalent number of missiles.

7. List of materials, Report No. ZM-8-116 revised 17 May 1954 listing materials used on this airplane which were not approved as of 13 July 1955.

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION

SAN DIEGO

REPORT ZD-8-022

DATE 31 July 1955

MODEL F-102A

TITLE

REPORT NO. ZD-8-022
DOCUMENTATION FOR WAIVERS FROM CONTRACTUAL REQUIREMENTS FOR ACCEPTANCE OF F-102A AIRPLANE AF S/N 53-1793

CONTRACT AF33(600)-5942

PREPARED BY

GROUP Project Specifications

REFERENCE

CHECKED BY

APPROVED BY

NO. OF PAGES

NO. OF DIAGRAMS

REVISIONS

NO.	DATE	BY	CHANGE	PAGES AFFECTED

FORM 1812 A-4

This report is prepared to define the condition of the aircraft as of factory completion for conditional acceptance by the Air Force. This report shall be revised to reflect the exact configuration as of the time of final acceptance by the Air Force.

PART I:

The following items are deviations from contractual requirements for Model F-102A Airplane, AF Serial No. 53-1793.

1. Engineering changes which have been incorporated in this airplane and for which Engineering Change Proposals have been submitted to AMC but which have not been approved as of 31 July 1955, are as follows:

ECP No. (CAC-F102-)	Title
233	Finish Requirements - Change of:
1069	Negative "G" Valve - Installation of:

2. List of required flight tests, Report No. ZC-8-117, revised 4 February 1955, that have not been accomplished on any airplane as of 31 July 1955.

3. Engineering data listed in exhibit of the contract which were required to be submitted prior to 31 July 1955, but which have not been submitted as of that date, are as follows (Paragraph numbers refer to those of the contract exhibit):

Exhibit "A"

Para.	
(b)	Stress Analysis
(c)	Actual Weight and Balance Report
(g)	(2) Handbook Flight Operating Instructions
(g)	Inspection Requirements
(g)	Illustrated Parts Breakdown

4. Equipment listed in Equipment Qualification Approval Status Report, Report No. ZM-8-091 dated 19 February 1954, Revised 21 September 1954, which is installed in this airplane, certain of which have been approved and certain of which have not been approved as of 31 July 1955.

5. Equipment listed in Industry Developed Equipment Status Report, Report No. ZM-8-091, dated 19 February 1954, Revised 21 September 1954, which is installed in this airplane, certain of which have not been approved as of 31 July 1955.

6. PART A

Shortages as listed in Air Force Form 263C, Part II, which affect the performance or mission of the airplane as noted. Performance or mission of the airplane is interpeted to mean the flight test assignment or the intended usage.

Description: ACA 8-653 - Windshield De-fog Circuit, Add transformers, change wire gauges, revise circuits, etc., to increase wattage on Nesa glass.
Remarks: Under icing conditions, the de-fog circuit will not supply sufficient wattage to keep windshield free of ice.
Limitation: The airplane should not be flown in icing conditions until ACA 8-653 has been incorporated. Also de-fog may not be provided under extreme conditions.

Description: ACA 8-13321 - Fwd. Engine Mount Linkage Lubrication
Remarks: Add MIL-G-7187 Grease to Fwd. Eng. Mount Linkage to prevent possible thread seizure.
Limitation: Lubricate at first engine removal.

Description: ACA 8-638 Windshield Overheat Warning Circuit - Addition of
Part No.: UN 108, THER 19
Quantity: One each
Remarks: This ACA provides for illumination of placard on caution panel if windshield vinyl overheats. Overheating will cause bubbles in windshield and necessitate replacement.
Limitation: Windshield rain clearing shall not be used on a dry windshield and for not more than 1-1/2 min. when wet.

Description: ACA 8-649 - Elevon Actuator Rod End Attachment - Revision to
Remarks: This ACA increases length of bushings and chrome plates the attaching bolt to prevent galling action between the elevon actuator rod end bearing inner race and the attaching bolt.
Limitation: Elevon actuator bearings should be lubricated after every 5 flight hours and rod end bearings inspected after every 10 hours of flight.

6. PART A (Cont)

Description: Pilot Assist (Ref. ACA 8-724 & ACA 8-523)
Part No.: UN 100, UN 36-28, POTE 103-1
Quantity: One each UN 100, & UN 36-28 and 2 POTE 103-1
Remarks: Pilot assist system shall not be used unless above items are installed. (UN 100 installed by original design release)

Description: Trim Servo & Speed Brake (Ref. ACA 8-740)
Part No.: UN 110-1, UN 110-2, UN 110-3, UN 110-5
Quantity: One each
Remarks: There will be no automatic elevator deflection to compensate for pitching effect from speed brake extension and no automatic trim for unstable stick forces until above units are installed.

Description: Missile Intervalometer Install. (Ref. ECP 1034)
Part No.: UN 120 Intervalometer
Quantity: One
Remarks: Must be installed prior to firing more than one missile at a time.

Description: Rocket Intervalometer Install. (Ref. TVA#42000)
Part No.: UN 66-2 Intervalometer
Quantity: One
Remarks: Substitution of UN 66-1 for UN 66-2 is acceptable for firing except CVAC UN 66-1 is not designed for 14 volt operation. Do not attempt to operate armament system on emergency D.C. power.

Description: Pitch Damper System - ACA 8-10851 (Amend)
Part No.: UN 100
Quantity: One each
Remarks: Pitch damper system shall not be used below 15,000 ft. until UN 100 is installed.

Description: Anti-Icing Duct Hole Provisions at B.L. 39.25, Sta. 295.00 in Rib (Ref. ACA 8-13442)
Remarks: ACA removes hole used for anti-icing duct.
Limitation: Must be accomplished before missile and/or rocket firing to prevent missile dust from entering L.E. thus causing corrosion.

Description: Refueling Instructions - Deleted

6. PART A (Cont)

Description: Constant Speed Drive - Oil System for
Part No.: 8-20503
Quantity: One
Remarks: Zero or negative "G" maneuvers shall be limited to three (3) seconds. Until a satisfactory oil system is designed, maneuvers in excess of that mentioned above will not supply oil to the unit during zero or negative "G" conditions.

Description: Change material of skin. Fuselage Sta. 443.3 to 481.7 Upper side. ACA 8-12881.
Remarks: Without this change incorporated, the airplane shall be limited to the following:

1. Aileron Deflections:
    (A) Aileron Angle - 7.2° Max. above 12,000 feet.
    (B) Aileron Angle - 5.0° Max. below 12,000 feet and above 480 knots calibrated.
2. Maximum roll rate of 100°/second for not more than 90° bank.
3. 4 g. Maximum Symmetrical load factor for roll maneuvers.

Description: Rain Clearing System (Ref. ACA 8-13469)
Part No.: VA 931-1 Valve
Quantity: One
Remarks: Valve is replaced by solid plug in duct valve, making rain clearing system inoperative.
Limitation: All-weather operations should not be planned until valve VA 931-1 is installed.

Description: Anti-Icing - Engine Duct Lips (Ref. ACA 8-13569)
Part No: VA 707-1
Quantity: One
Remarks: Valve is replaced by solid plug in duct valve making anti-icing of engine duct lips inoperable.
Limitation: All-weather operations should not be planned until valve VA 707-1 is installed.

Description: ACA 8-13533 Surface and Engine Air Anti-Ice Citcuit - Revision of (53-1793 only)
Part No.: VA 891-8
Quantity: One
Remarks: No present limitation since valve has been deleted due to instrumentation by TVA #IN37224 against 8-87046. If valve is reinstated the following limitation will exist until accomplishment of ACA 8-13533.
Limitation: Until ACA 8-13533 is accomplished, airplane is not to be flown in icing conditions.

6. PART A
(Cont)

The following limitation, though not due to parts shortage, should also be noted.

Description: Change material of skin. Fuselage Sta. 443.3 to 481.7 Upper side. ACA 8-12881.

Remarks: Without this change incorporated, the airplane shall be limited to the following:

1. Aileron Deflection:
   - (A) Aileron Angle = 7.2° Max. above 12,000 feet.
   - (B) Aileron Angle = 5.0° Max. below 12,000 feet and above 480 knots calibrated.
2. Maximum roll rate of 100°/second for not more than 90° bank.
3. 4g. Maximum Symmetrical load factor for roll maneuvers.

Description: Mid-Electronics Door (Data link antenna Installation)

Remarks: A satisfactory UHF Data Link antenna has not been developed for incorporation in the mid-electronics door. A similar door deleting the antenna installation has been installed. No limitations are imposed on the aircraft until the MG 10 - Data Link installations are made.

Description: Missile Launching System

Remarks: Launcher extension and retraction times are in excess of that required by Model Specification. A fast action system is being developed to be compatible with specification requirements but is not available for incorporation in this airplane. The only limitations or restrictions imposed with this slower system is the reduction in kill probability due to having to stay on target longer periods of time to fire an equivalent number of missiles.

6. Shortages as listed in Air Force Form 263C, PART II which do not affect the performance or mission of the airplane as defined for its intended usage, however these shortages do prevent the airplane from meeting the airplane specification requirements for a tactical airplane.

NOTE: Items indented in each column are items not installed due to the noted shortage above them, these pieces are generally required to complete an installation or assembly.

QUANTITY		DESCRIPTION	PART NO.
1		Housing Instl-Brake Chute - 8-73491	8-44471-23
	1		8-44471-25
	1		AN 393-19
	1		AN 380-2-2
1		Tip Instl-Wing L/H - 8-17900	8-17901-801
1		Tip Instl-Wing R/H - 8-17900	8-17901-802
8		Washer Instl-Tra-Edge - 8-80010-969	8-80009-745
1		Tube Instl-MWW L/H - 8-80010-937	8-80010-1231
1		Tube Instl-MWW L/H - 8-80409-937	8-80010-783
1		Tube Instl-Ctr Miss Bay - 8-80409-908	MS21919DG6
3		Tube Instl-Ctr Miss Bay - 8-80409-909	Q 918-5
	1		Q 918-7
	1		NAS 43DD3-28
3		Tube Instl-Ctr Miss Bay - 8-80409-910	MS21919DG-4
	3		AN 743-12
	1		Q 918-5
1		Tube Instl-Ctr Miss Bay - 8-80409-911	MS21919DG-4
1		Tube Instl-Aft Hyd Bay - 8-80409-900	MS21919DG-16
1		Tube Instl-N.W.W. - 8-80409-903	NAS 43DD3-40

6. (Cont)

QUANTITY		DESCRIPTION	PART NO.
	1	Tube Instl-N.W.W. - 8-80409-903	NAS 43DD3-12
	2		NAS 43DD3-24
	1		MS21919DG-14
	1		MS21919DG-3
1		Tube Instl-Ctr Miss Bay - 8-80409-906	NAS43DD3-16
3		Tube Instl-Ctr Miss Bay - 8-80409-907	Q 918-5
	1		NAS43DD3-12
	1		NAS43DD3-48
1		Tube Instl-Ctr Miss Bay - 8-80409-913	MS21919DG-6
	1		NAS43DD3-48
	1		NAS43DD3-40
2		Tube Instl-Ctr Miss Bay - 8-80409-914	Q 918-5
	1		NAS43003-24
2		Tube Instl-Ctr Miss Bay - 8-80409-915	NAS43DD3-32
	8		Q 918-5
	5		NAS43DD3-16
	2		MS21919DG-6
2		Tube Instl-Ctr Miss Bay - 8-80409-916	NAS43DD3-16
	2		Q18-5
	2		Q18-5
5		Tube Instl-R/H Miss Bay - 8-80409-917	NAS43DD3-12
	7		NAS43DD3-20
	1		MS21919DG-20

6. (Cont)

QUANTITY		DESCRIPTION	PART NO.
1		Tube Inst-R/H Miss Bay - 8-80409-918	MS21919DG-3
	1		NAS43DD3-16
	1		NAS 43DD3-12
4		Tube Inst-R/H Miss Bay - 8-80409-919	NAS43DD3-16
	2		NAS43DD3-12
	2		Q 918-7
	2		NAS43DD3-8
2		Tube Inst-Refrig Area - 8-80409-920	NAS43DD3-20
	2		NAS43DD3-12
	1		MS21919DG3
1		Tube Inst-L/H Miss Bay - 8-80409-921	NAS43DD3-24
	1		NAS43DD3-16
1		Tube Inst-L/H Miss Bay - 8-80409-922	MS21919DG-6
2		Tube Inst-L/H Miss Bay - 8-80409-925	AN-743-12
1		Tube Inst-L/H Miss Bay - 8-80409-926	AN-743-12
1		Tube Inst-L/H Miss Bay - 8-80409-928	NAS43DD3-20
	1		Q 918-5
1		Tube Inst-L/H Miss Bay - 8-80409-929	NAS43DD3-16
1		Tube Inst-MLG L/H Miss Bay - 8-80409-930	NAS43DD3-12
	1		AN-743-12
2		Tube Inst-Engine Access - 8-80409-934	NAS43DD3-28
	5		MS21919DG3
	1		MS21919DG-4
	1		NAS43DD3-24
	1		NAS43DD3-8

6. (Cont)

QUANTITY		DESCRIPTION	PART NO.
1		Tube Inst-Engine Access - 8-80409-936	NAS43DD3-20
	1		Q 918-5
1		Tube Inst-MWW L/H - 8-80409-937	NAS43DD3-24
1		Tube Inst-MWW R/H - 8-80409-938	MS21919DG-3
1		Tube Inst-Cntr Miss Bay - 8-80409-977	NAS43DD3-32
5		Tube Inst-NWW L/H - 8-80409-980	MS21919DG-3
	1		MS21919DG-18
	1		MS21919DG-20
	2		NAS43DD3-8
	1		NAS43DD3-24
	2		NAS43DD3-16
	1		NAS43DD3-32
1		Tube Inst-Cntr Miss Bay - 8-80409-914	8-80409-779
	1		8-80409-781
	2		MS21919DG-4
	2		NAS43DD3-24
1		Gyro Instl-Vert - 8-68159-BASIC	UN-36-28
1		Tip Inst-Wing R/H - 8-17900-4	8-17901-802
1		Tip Instl-Wing L/H - 8-17900-3	8-17901-801
1		Tip Instl-Wing R/H - 8-17900-4	8-17901-6
1		Tip Instl-Wing L/H - 8-17900-3	8-17901-5

Instrumentation shortages are listed in Instrumentation Report.

7. List of materials, Report No. ZM-8-116 Revised 17 May 1954 listing materials used on this airplane which were not approved as of 13 July 1955